Service Manual

ViewSonic E70-11

Model No. VCDTS22355-3

17” Digital Controlled Color Monitor

(E70-11_SM_884 Rev. 1a – Jun. 2004)

ViewSonic® 381 Brea Canyon Road, Walnut, California 91789 USA - (800) 888-8583

Revision History

Revision	Date	Description Of Changes	Approval
1a	06/01/04	Initial Release DCN- 4484	Angela Lu

TABLE OF CONTENTS

1. Precautions And Safety Noticess

WARNING!

This service information is designed for experience repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.

Products powered by electricity should be serviced or repaired only by experienced professional technicians.

Any attempt to service or repair the product or products dealt within this service information by anyone else could result in serious injury or death.

1. CAUTION

No modification of any circuit should be attempted. Service work should only be performed after you are thoroughly familiar with all of the following safety checks and servicing guide lines.

2. SAFETY CHECK

Care should be taken while servicing this CRT display because of the high voltage used in the deflection circuits. These voltages are exposed in such areas as the associated flyback and yoke circuits.

3. FIRE & SHOCK HAZARD

3-1 Insert an isolation transformer between the CRT display and AC power line before servicing the chassis.

3-2 In servicing pay attention to original lead dress especially in the high voltage circuit. If a short circuit is found, replace all parts which have been overheated as a result of the short circuit.

3-3 All the protective devices munt be reinstalled per original design.

3-4 Soldering must be inspected for possible cold solder joints, frayed leads, damaged insulation, solder splashes or sharp solder points. Be certain to remove all foreign material.

4. LEAKAGE CURRENT COLD CHECK

4-1 Unplug the AC cord and connect a jumper between the two prongs on the plug.

4-2 Turn the CRT display power switch “on”.

4-3 Measure the resistance value with an ohmmeter between the jumpered AC plug and each exposed metallic part on the CRT display such as the metal frame, screwheads, control shafts, etc. When the exposed metallic part has a return path to the chassis, the reading should be 1.8 megohm minimum.

5. LEAKAGE CURRENT HOT CHECK

5-1 Plug the AC cord directly into the AC outlet. Do not use an isolation transformer during this check.

5-2 Connect a 1500 ohm, 10 watt resistor, paralleled by a 0.15uF capacitor between each exposed metallic part and a good earth ground (as shown in Fig.1).

5-3 Use an AC voltmeter with 1000 ohm/volt or more sensitivity and measure the AC voltage across the combination 1500 ohm resistor and 0.15uF capacitor.

5-4 Move the resistor connection to each exposed metallic part and measure the voltage.

5-5 Reverse the polarity of the AC plug in the AC outlet and repeat the above measurement.

5-6 Voltage measured must not exceed 7.5 volt RMS, from any exposed metallic part to ground A leakage current tester may be used in the above hot check, in which case any current measured must not exceed 5.0 milliamp. In the case of a measurement exceeding the 5.0 milliamp value, a rework is required to eliminate the chance of shock hazard.

Note： High voltage is present when this CRT display is operating. Always discharge the anode of the picture tube to the display chassis to prevent shock hazard.

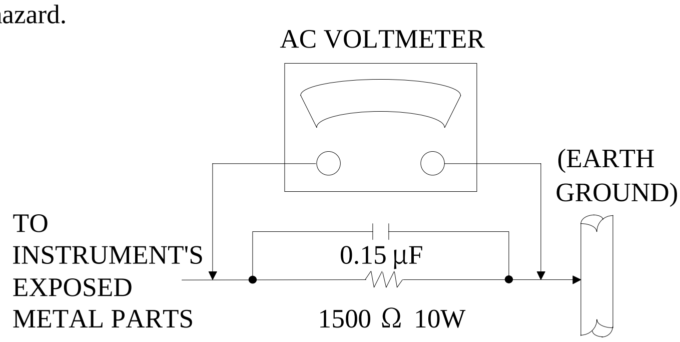


Fig. 1

6. IMPLOSION PROTECTION

Picture tubes are equipped with an integral implosion protection system, but care should be taken to avoid damage and scratching during installation. Use only Panasonic replacement picture tubes.

7. X-RADIATION

WARNING：The only potential source of X-Radiation is the picture tube. However when the high voltage circuit is operating properly there is no possibility of X-Radiation problem. The basic precaution which must be exercised is to keep the high voltage at the following factory-recommended level.

Note： It is important to use an accurate periodically calibrated high voltage meter.

7-1 The procedure for adjusting high voltage is shown on page 12.

7-2 If can not be adjust 25.0 KV at immediate service is required to prevent the possibility of premature component failure.

7-3 To prevent X-Radiation possibility it is essential to use the specified picture tube.

IMPORTANT SAFETY NOTICE

There are special components used in this CRT displays which are important for safety. These parts are identified by the international symbol ⚠ on the schematic diagram and on the replacement parts list. It is essential that these critical parts should be replaced with manufacture’s specified parts to prevent X-RADIATION, shock, fire, or other hazards. Do not modify the original design or this will void the original parts and labor guarantee.

2. Specification

1. CRT : 43.2CM(17") 90 Deflection, 29mm Neck, 0.27mm Dot Pitch, Non-Glare Screen

2. Viewable image Size: 40.6CM (16") diagonal

3. Display Color: Unlimited Colors

4. External Controls:
   Power On/Off, OSD key, Function knob: Contrast, Brightness, Degauss, H-Size, H-Center, V-Center, V-Size, ZOOM, Pincushion, Trapezoid, Pin-Balance, Parallelogram, Rotation, Color Temperature, H-Moire Reduce, V-Morie, Memory Recall, Language, ViewMeter. OSD position select

5. Input Video Signal

Mode	1	2	3	4	5	6	7	8	9	10	11	12
Horizontal Freq. (KHz)	31.47	31.47	37.5	43.27	46.87	53.67	60.02	68.67	63.98	35.000	832*624	1024*768
Dot Clock (MHz)	25.18	28.18	31.5	36	49.5	56.25	78.75	94.5	108	30.240	57.283	80.000
Horizontal Lines	720	640			800		1024		1280	640	832	1024
Vertical Lines	400	480			600		768		1024	480	624	768
H. Sync Polarity	NEG	NEG	NEG	NEG	POS	POS	POS	POS	Pos	NEG	NEG	NEG
H. Period (μs)	31.78	31.78	26.67	23.11	21.333	18.63	16.66	14.56	15.63	28.571	20.111	16.600
H. Sync Width (μs)	3.18	3.81	2.03	1.56	1.616	1.138	1.219	1.016	1.037	2.116	1.117	1.200
H. Back Porch (μs)	1.96	1.589	3.81	2.22	3.232	2.702	2.235	2.201	2.296	3.175	3.910	2.200
H. Active (μs)	25.42	25.42	20.32	17.78	16.162	14.22	13	10.83	11.85	21.164	14.524	12.800
Vertical Freq. (Hz)	69.93	59.94	75	85.01	75	85.06	75.02	84.99	60.02	66.667	75.550	74.927
V. Sync Polarity	POS	NEG	NEG	NEG	POS	POS	POS	POS	Pos	NEG	NEG	NEG
V. Period (ms)	14.3	16.68	13.33	11.76	13.333	11.75	13.32	11.76	16.66	15.000	13.414	13.346
V. Sync Width (ms)	0.06	0.06	0.08	0.07	0.064	0.056	0.05	0.044	0.047	0.086	0.060	0.050
V. Back Porch (ms)	1.14	0.79	0.43	0.58	0.448	0.503	0.466	0.524	0.594	1.114	0.784	0.498
V. Active (ms)	12.71	15.25	12.8	11.09	12.8	11.17	12.79	11.18	16	13.714	12.549	12.749
Standard	VGA	VGA	VESA	VESA	VESA	VESA	VESA	VESA	VESA	MAC	MAC	MAC

6. Display Size
   Horizontal: 310 mm +/-4mm
   Vertical: 230 mm +/-4mm

7. Scanning Frequencies
   Horizontal: 30KHz ~ 70KHz
   Vertical: 50 Hz ~ 160 Hz

8. Factory Preset Timings: 12
   User Timings: 20

9. Misconvergence
   A Zone: 0.25 mm Max.
   B Zone: 0.30 mm Max.
   C Zone 0.35 mm Max

10. Video Bandwidth: 120 MHz

11. Power Source:
Switching Mode Power Supply
AC 100 ~240V, 50/60Hz Universal Type

12. Operating Temperature: 0°C to 40°C Ambient

13. Humidity: 5% to 95% Relative, Non-Condensing

14. Weight: 15. Kgs(Net), 17.5Kgs(Gross)

Width: 410 mm
Height: 402 mm
Depth: 420mm

16. External Connection:
15 Pin D-sub Connector
AC Power Cord

17. Regulatiory/Safety

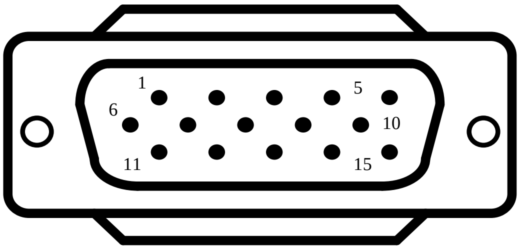
Regulatory Filing	Regulatory filing should be made under the “Model Number-XY”

Pacific Asia Australia, New Zealand, So. Africa	UL1950, c UL1950,FCC Part 15 Subpart J Subpart B, DHHS Part 21 Subpart J X-Ray Protection, CSA 22.2/cUL950, ICES-003 Class B, CB, CE, MSMI, PSB, C-TICK, EPA Energy Star, VCC I
Europe	UL1950, FCC Part 15 Subpart J Subpart B, DHHS Part 21 Subpart J X-Ray Protection, CSA 22.2/cUL950, ICES-003 Class B, CB, EMC/CE, TUV/GS, NEMKO, SEMKO, DEMKO, FIMKO, Gost-R, PCBC, SASO, Energy Star
15.2 International	
	CB, MPRII, CE
15.3 Power Management	
Power Management	Amendment to EnergyStar Version 2 MOU, dated

OPERATING INSTRUCTIONS

This procedure gives you instructions for installing and using the Color display.

1. Position the display on the desired operation and plug the power cord into a convenient AC outlet. Three-wire power cord must be shielded and is provided as a safety precaution as it connects the chassis and cabinet to the electrical conduit ground. If the AC outlet in your location does not have provisions for the grounded type plug, the installer should attach the proper adapter to ensure a safe ground potential.
2. Connect the 15-pin color display shielded signal cable to your signal system device and lock both screws on the connector to ensure firm grounding. The connector information is as follow:



15 - Pin Color Display Signal Cable

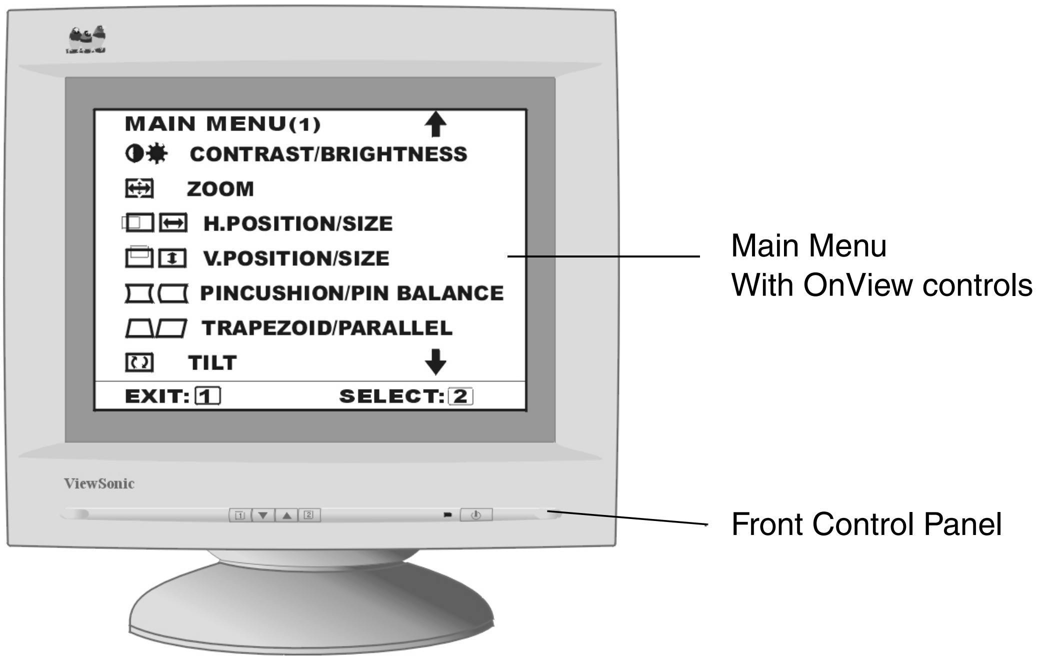
PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1.	RED	9.	5V From PC
2.	GREEN	10.	Sync GND
3.	BLUE	11.	NC
4.	GND	12.	SDA
5.	GND	13.	HORIZ. SYNC
6.	GND-R	14.	VERT. SYNC (∗VCLK)
7.	GND-G	15.	SCL (DDC CLOCK)
8.	GND-B		

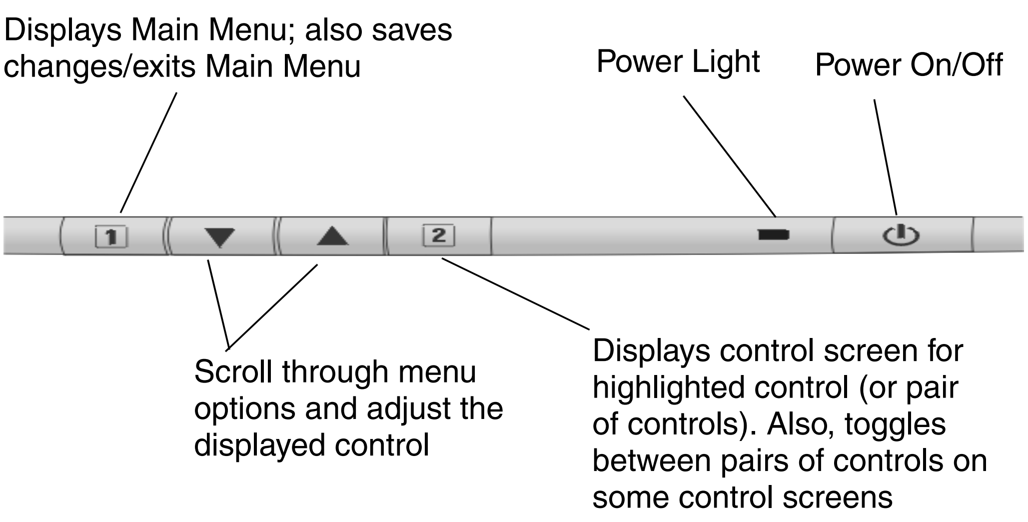
3. Apply power to the display by turning the power switch to the "ON" position and allow about thirty seconds for display tube warm-up. The Power-On indicator lights when the display is on.
4. With proper signals feed to the display, a pattern or data should appear on the screen, adjust the brightness and contrast to the most pleasing display.
5. This monitor has power saving function following the VESA DPMS. Be sure to connect the signal cable to the PC.
6. If your color display requires service, it must be returned with the power cord.

3. Front Panel Function Control Description

Adjusting the Screen Image

Use the buttons on the front control panel to display and adjust the OnView® controls which display on the screen. The OnView controls are explained at the top of the next page and are defined in “Main Menu Controls” on page 8.





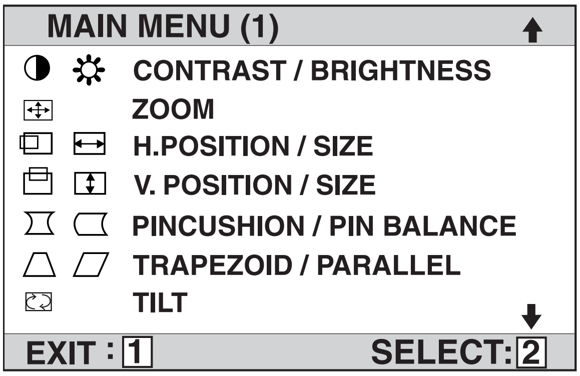
OSD Lock Settings

You have the option of using the On Screen Display (OSD) locking feature, OSD LOCK, to prevent unwanted changes to the current image settings.

- **OSD Lock:** Press and hold the [1] and [▼] buttons on the face of the monitor for 10 seconds. The message "OSD LOCK" will then display briefly, indicating that the OSD image settings are now locked.
- **OSD Unlock:** Press and hold the [1] and [▼] buttons again for 10 seconds. The message "OSD UNLOCK" will then display briefly, indicating that the OSD image settings are now unlocked.

Do the following to adjust the screen image:

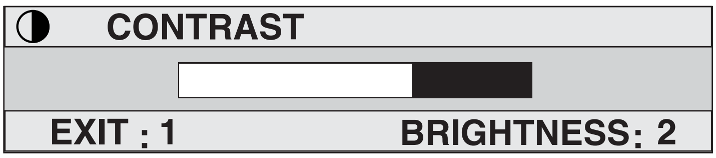
1 To display the Main Menu, press button [1].



2 To select a control you want to adjust, press the arrow buttons on the front control panel of your monitor and scroll through the choices. When the control you want is highlighted, press button [2].

NOTE: Some controls on the Main Menu are listed in pairs, such as Contrast/Brightness. Display control screen (sample shown in step 3 below). Press button [2] to toggle to the next control in the pair.

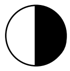
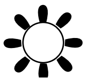
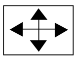
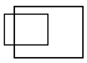
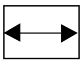
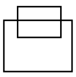
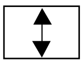
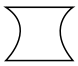
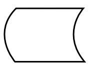
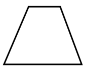
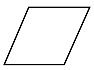
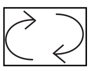
3 To adjust the selected control, such as **CONTRAST** in the sample below, press the arrow buttons.

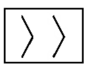
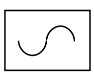


4 To save the control setting and Exit the menu press button [1] *twice*.

Main Menu Controls

Adjust the menu items shown below by using the up and down buttons.

Control	Explanation
	**Contrast** adjusts the difference between the image background (black level) and the foreground (white level).
	**Brightness** adjusts the background black level of the screen image.
	**Zoom** expands and contracts the entire screen image.
	**Horizontal Position** moves the screen image left or right.
	**Horizontal Size** adjusts width of the screen image.
	**Vertical Position** moves the screen image up or down.
	**Vertical Size** adjusts the height of the screen image.
	**Pincushion** curves the vertical sides of the screen image.
	**Pin Balance** curves the vertical edges of the screen image to the left or right.
	**Trapezoid** adjusts the top and bottom of the screen image until they have equal length.
	**Parallel** slants the vertical edges of the screen image until they are parallel.
	**Tilt** rotates the entire screen image.

Control	Explanation
	**Degauss** removes the build-up of magnetic fields that can cause irregular colors to appear around the edges of screen images. There are two ways to degauss the display: automatically by turning the monitor on, or manually by selecting the Degauss control from the menu. With Degauss selected from the menu, press button [2] to degauss the monitor manually. **Important:** *Do not degauss repeatedly. Doing so can be harmful to the display. Wait at* least 20 minutes (before selecting this control again.
	**ViewMatch® Color** provides several color options: several preset color temperatures and User Color which allows you to adjust red (R), green (G), and blue (B). The factory setting for this product is 9300K (9300° Kelvin). **9300K —** Adds blue to the screen image for cooler white (used in most office settings with fluorescent lighting). **6500K —** Adds red to the screen image for warmer white and richer red. **5000K —** Adds blue and green to the screen image for a darker color. **User Color —** Individual adjustments for red, green, and blue.
	**Moire** reduces interference patterns that appear as ripples, waves, or unwanted background color textures. Interference patterns of this type are most noticeable when viewing images having closely spaced lines or finely detailed patterns.
	**Language** allows you to choose from among several languages for the menus and control screens: English, French, German, Italian, and Spanish.
	**Memory Recall** returns adjustments to the original factory settings if the display is operating in a factory preset timing mode listed in this user guide. *Exception:* This control does not affect changes made with the **User Color** control.
	**ViewMeter** displays the frequencies (horizontal and vertical) coming from the graphics card of the computer.

4. Circuit Description

4-1 MICRO CONTROLLER CIRCUIT

MICRO Controller

The IC101 contains a 8031 8-bit CPU core, 60K bytes of RAM, 16K bytes of ROM,14 channel 8 bit PWM D/A converters, 2 channel A/D converters for key detection,0.5sec watch-dog timer, internal H-sync and V-sync signals processor providing mode detection, watch- dog timer preventing system from abnormal operation, and an I²C bus interface.

H/V sync signals processor

The functions of the sync processor include polarity detection, H-SYNC & V-SYNC signals counting, Programmable SYNC signals output, free running signal generator. Pin41/Pin42 are for the H-SYNC and V-SYNC input, Pin34/Pin33 will output the same signal as input sync signal without delay, and the polarity are setting in the positive. When no signal input, the Pin32 will output a 60Hz V-SYNC free run signal. The Pin33 will output a 48KHz H-SYNC free run signal. for the monitor testing use.

On Screen Display Controller

The IC801 is designed for display the built-in characters or fonts onto monitor screen. The display operation is by transforming data and control information from micro controller to RAM through a serial data interface.
Pin2 is used to control the internal oscillator frequency by DC voltage input from external low pass filter (R154, C166, R155) and filter (R175, C167) is used to regulate the appropriate bias current for internal oscillator the resonate at specific dot frequency.
Pin5 is input the horizontal fly back pulse, for PLL generator tracking.
Pin6 is left floating, I²C bus is enabled. Otherwise the SPI bus is enabled.
Pin7 the external data transfer through this pin to internal display registers and control registers
Pin8 the clock-input pin is used to synchronize the data transfer.
Pin10 is input the vertical flyback pulse for synchronizing the vertical position.
Pin12 is output a blanking signal to cut off external R.G.B signals of VGA while this chip is displaying characters or windows.
Pin13, Pin14, Pin15 is used to output the OSD (B.G.R) video signal.

4-2 DEFLECTION CIRCUIT

The deflection circuit is achieved by a high performance and efficient solution IC 401 (TDA4841) for this monitor. The concept is fully DC controllable and can be used in applications with a micro-controller solutions.
The TDA4841 provides sync. Processing with full auto sync. Capability, a flexible SMPS block and an extensive set of geometry control facilities. Further the IC generates the drive waveforms for DC coupled vertical boosters to the TDA4863.

Horizontal Oscillator

The oscillator is of the relaxation type and requires a capacitor of 1nF C403 at pin29.

PLL 1 Phase Detector

The phase detector is a standard one using switched current sources. It compares the middle of H-sync. with a fixed point on the oscillator saw-tooth voltage. The PLL loop filter C401, C402, R409 is connected to Pin26.

PLL2 Phase Detector

The PLL2 detector thus compensates for the delay in the external H-deflection circuit by adjusting the phase of the HDRV output pulses. The phase between H-flyback and H-sync can be controlled at pin30.

X-ray Protection

The X-ray protection input pin2 provides a voltage detector with a precise threshold. If the voltage exceeds this threshold for a certain time, an internal latch switches the whole IC into protection mode. In this mode several pins are forced into defined states:

Pin6 (BDRV) is floating
Pin8 (HDRV) is floating
Pin12, 13 (VOUT 12, 13) are floating

Vertical Oscillator

The vertical free –running frequency is determined by the resistor C613 at pin24. Usually the free-running frequency should be lower than the minimum trigger frequency.

4-3 TRANSISTOR & DIODE CIRCUIT

LOCATION	CIRCUIT FUNCTION DESCRIPTION
D901 ~ D904	Bridge Rectifier for AC Source
D910	Clamp Diode for Snubber CKT
D918, D919	Rectifier for Output Voltage
D922	Rectifier for Output Voltage
D923	Rectifier for Output Voltage
D925	Rectifier for B+ Supply
Q901	MOS FET for Switching Power Control.
Q907, Q908	Use for Off-Mode to Cut-off 6.3V Supply Voltage
Q909, Q918	Use for Standy-By or Suspend Mode to Cut-off 12V Supply Voltage
Q912, Q920	Push-Pull Topology to Drive Q911
Q913	Degaussing Switcher Transistor
Q921	5V Regulator Transistor
Q701	Turn-on at Power ON/OFF and Change Mode to Protect Hor.Block
Q402	HOR. Driver Transistor
Q426	Horizontal s correction control MOSFET
Q404, Q405	As Differential Amp. to Drive Q406
Q406	Transistor for H-Size Control
Q705	Brightness Control CKT

5. Adjusting Procedure

5-1 ADJUSTMENT CONDITIONS AND PRECAUTIONS

1. Approximately 30 minutes should be allowed for warm up before proceeding.
2. Adjustments should be undertaken only on those necessary elements since most of them have been carefully preset at the factory.

5-2 MAIN ADJUSTMENTS

NO.	FUNCTION			LOCATION	DESIGNATION
1.	14V ADJ			PCB - MAIN	VR903
2.	B + ADJ			PCB - MAIN	VR902
3.	SCREEN ADJ			FLY BACK TRANS	T402 SCREEN VR
4.	FOCUS ADJ			FLY BACK TRANS	T402 FOCUS VR1&VR2
5.	ABL ADJ			PCB - MAIN	AB in factory OSD
6.	FUNCTION ADJ	-MENU		PCB - MAIN	(SW101)
		-UP	►	PCB - MAIN	(SW102)
		-DOWN	◄	PCB - MAIN	(SW103)
		-EXIT		PCB - MAIN	(SW104)

5-3 ADJUSTMENT METHOD

1. 14V, B + & HV voltage adjustment:
   A. Chroma-2000 Signal generator or PC equivalent set mode 1, VGA 640X480 pattern 1.0.
   B. Connect a DC Volt meter between TP901 and ground, then adjust VR903to be 14VDC.
   C. Connect a DC Volt meter between TP902 and ground, then adjust VR902 to be 65.5 VDC.

2. Factory preset Timings Adjustment:
   A. Press [1] Key to show OSD window press Up or Down Key to switch the functional controls.
   B. Press the Up Key to select the "ZOOM" function, then press the MENU Key. While do not release the MENU Key until the OSD window changed to the Factory preset window.
   C. The Factory preset window contains the following functional controls. Select one of the control. Then press the Up/Down Key to adjust its value for the optimum picture.



	CONTRAST		H-MOIRE REDUCE
	BRIGHTNESS		V-MOIRE REDUCE
	H-CENTER		R-GAIN

	H-SIZE		G-GAIN
	V-CENTER		B-GAIN
	V-SIZE		R-BIAS
	ZOOM		G-BIAS
	PINCUSHION		R-BIAS
	TRAPEZOID	**9300**	COLOR TEMPERATURE
	PIN-BALANCE	**6500**	COLOR TEMPERATURE
	PARALLELOGRAM	**5500**	COLOR TEMPERATURE
	ROTATION	EXIT	OSD EXIT
LC	V-LINEARITY		RETURN
LS	V-LINEARITY	HP	H-size Max range limit.
AB	ABL CORTROL	Tm	Operation time record.
	TOP CORNER	BI	BURN IN
	BOTTOM CORNER		DEGAUSS

D. To switches the input signal to the other Timing Mode. Please follow step A ~ C to get the optimum picture.

E. Select the " " RETURN function and press the MENU Key, then the Factor Preset window will be returned to the original OSD window.(user's operating condition)

F. The setting data of the CONTRAST, BRIGHTNESS, PIN-BALANCE, PARALLELOGRAM, ROTATION, COLOR TEMPERATURE are common mode saved in the memory. Don't needed adjust it individual at every timing Mode and save in the memory.

3. White Balance, Luminance adjustment:

A. Bias (Low Luminance) adjustment:

(a) Set mode 1024*768 Fv: 85Hz full white pattern.

(b) To make the adjustment condition is under the Factory preset window.
Same as step 2-B.

(c) Warm up more than 20 minutes.

(d) Brightness set to maximum. Contrast set to maximum. full raster pattern,

(e) Fixup G-Bias(DAC=30), adjust B-Bias , R-Bias , then adjust FBT screen VR to make x= 283 ± 10, y= 298 ± 10 Y= 3.5±2cd/m² Brightness set to raster just cutoff(0.05cd/ m²), to save to color temperature 9300k .

B. Gain (High light) adjustment:

(a) Set mode 1024*768 Fv: 85Hz 20% of default image pattern.

(b) Brightness set to raster just cutoff and set the contrast to max.

(c) Adjust G-Gain , B-Gain , R-Gain , to make color temperature x=283 ± 10, y=298 ± 10. Y=155±10cd/m².

C. The adjustment of 6500°K white Balance, May follow step A ~ B , with the x=313 ± 10, y=329 ± 10.Y=145±10cd/m^2

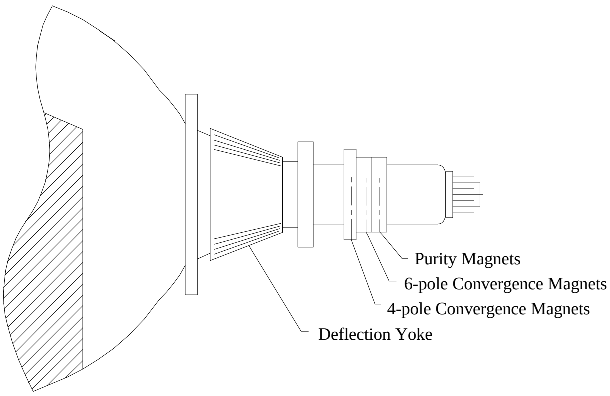
D. Thr adjustment of 5000°K white Balance, May follow step A-B, with the x=346± 10, y=359 ± 10, Y=135±10cd/m^2

E. Full white luminance:
   (a) Set mode1 1024*768 Fv: 85Hz full white pattern.
   (b) Image Size : H:310±4mm V:230±4mm.
   (c) Brightness set to raster just cut off and set the contrast to max.
   (d) Adjust AB() to the luminance at 105± 10cd/m^2.

4. Focus Adjustment:
   A. Set mode 1024×768 Fv: 85Hz with character full page.
   B. Adjust brightness to center and contrast to max.
   C. Then adjust focus VR1 to a fine vertical line.
   D. Adjust focus VR2 to a fine horizontal line.
   E. Repeat step C & D.

5. Purity Adjustment
   A. Be sure that the display is not being exposed to any external magnetic fields.
   B. Ensure that the spacing between the Purity, Convergence, Magnet, (PCM), assembly and the CRT stem is 29mm. (See below diagram)
   C. Produce a complete, red pattern on the display. Adjust the purity magnet rings on the PCM assembly to obtain a complete field of the color red. This is done by moving the two tabs in such a manner that they advance in an opposite direction but at the same time to obtain the same angle between the two tabs, which should be approximately 180'.
   D. Check the complete blue and complete green patterns to observe their respective color purity. Make minor adjustments if needed.

RELATIVE PLACEMENT OF TYPICAL COMPONENTS

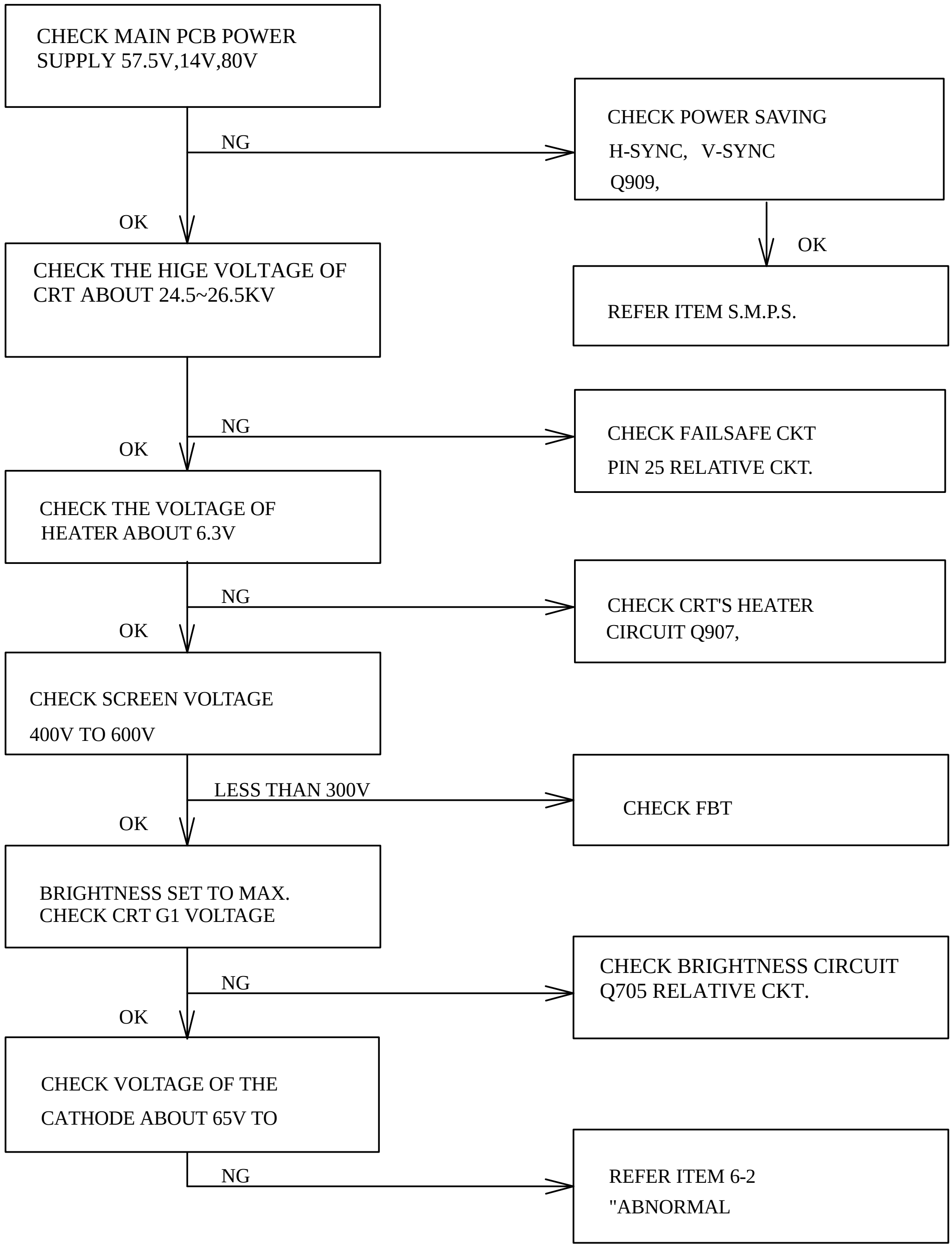


6. Convergence adjustment

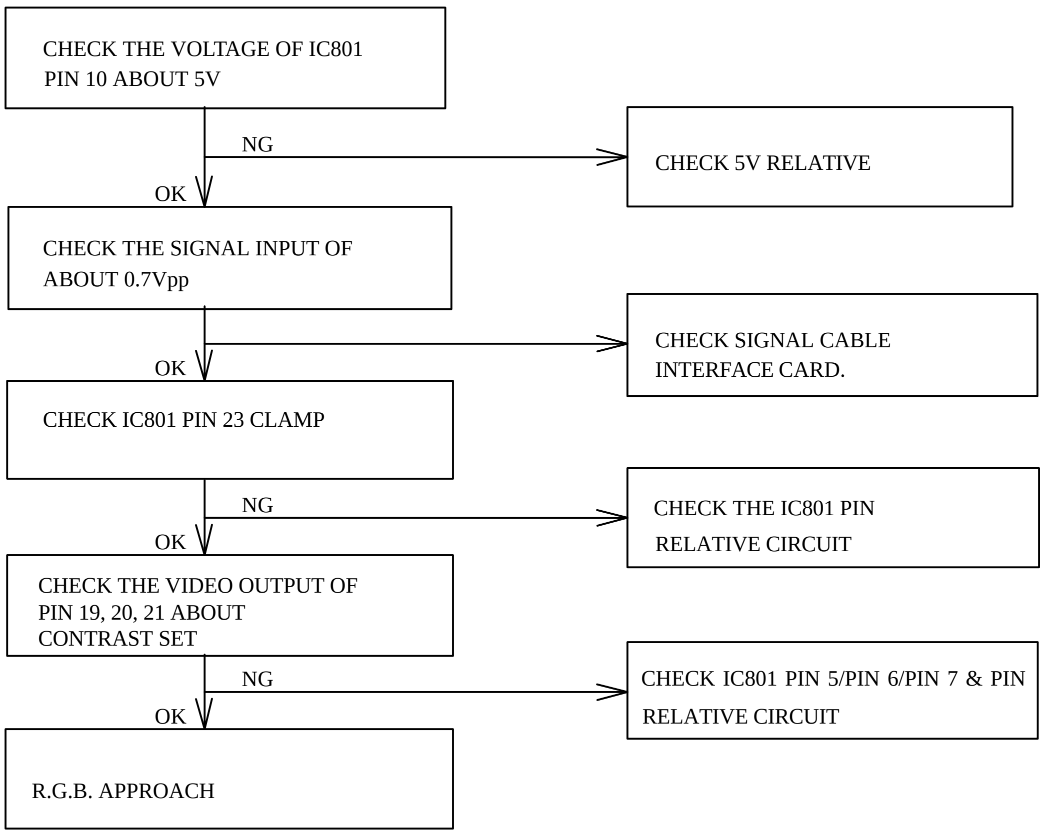
   A. Produce a magenta crosshatch on the display.
   B. Adjust the focus for the best overall focus on the display.
      Also adjust the brightness to the desired condition.
   C. Vertical red and blue lines are converged by varying the angle between the two tabs of the 4 pole magnets on the PCM assembly. (See above diagrams)
   D. Horizontal red and blue lines are converged by varying the two tabs together, keeping the angle between them constant.
   E. Produce a white crosshatch pattern on the display.
   F. Vertical green and magenta lines are converged by varying the angle between the two tabs of the 6-pole magnets.
   G. Horizontal green and magenta lines are converged by varying the two tabs together, keeping the angle between them constant.

6. Trouble Shooting Flow Chart

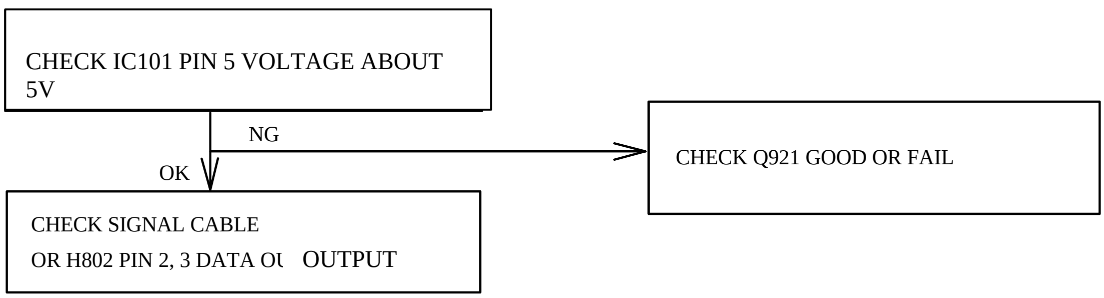
6-1 NO RASTER, CRT RELATIVE CIRCUIT PROBLEMS



1.ABNORMAL VIDEO LEVEL ON SCREEN

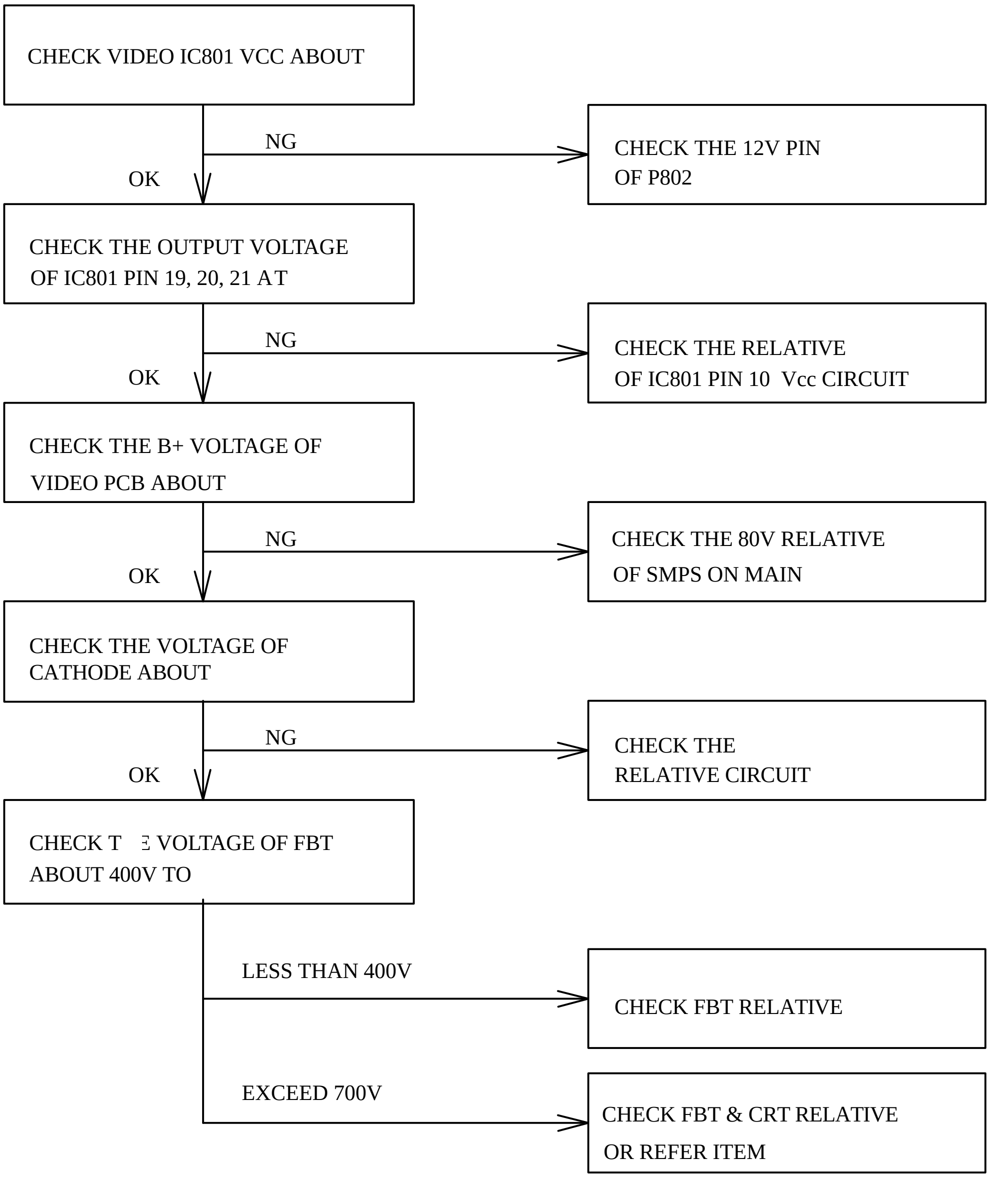


2. ABNORMAL DDC (PLUG & PLAY)

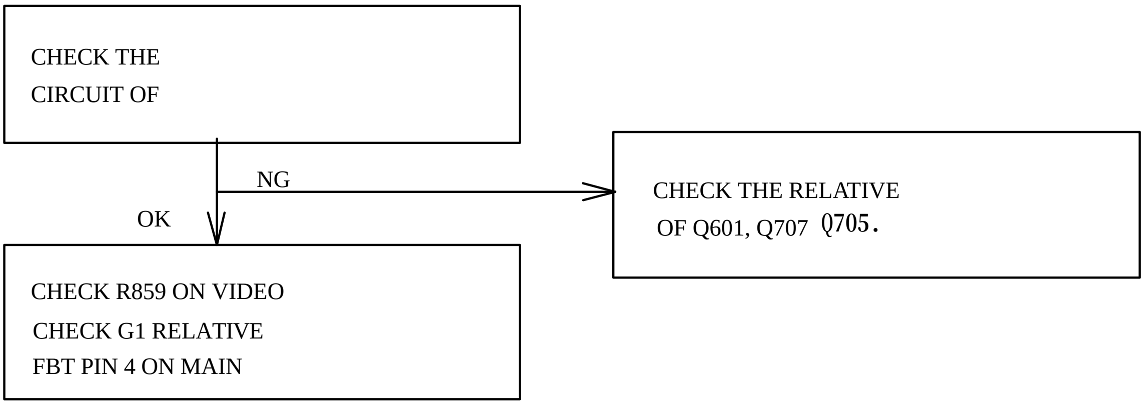


6-2 ABNORMAL DISPLAY

1.NO SIGNAL ON SCREEN

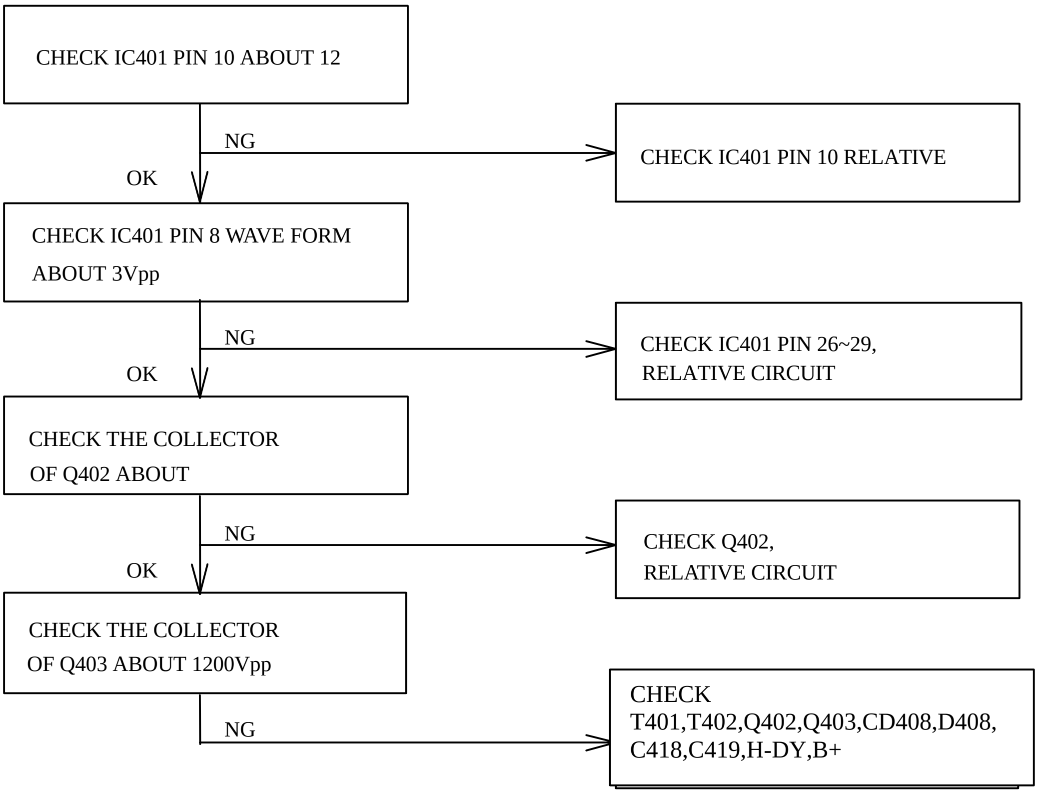


6-3 NO BLANKING



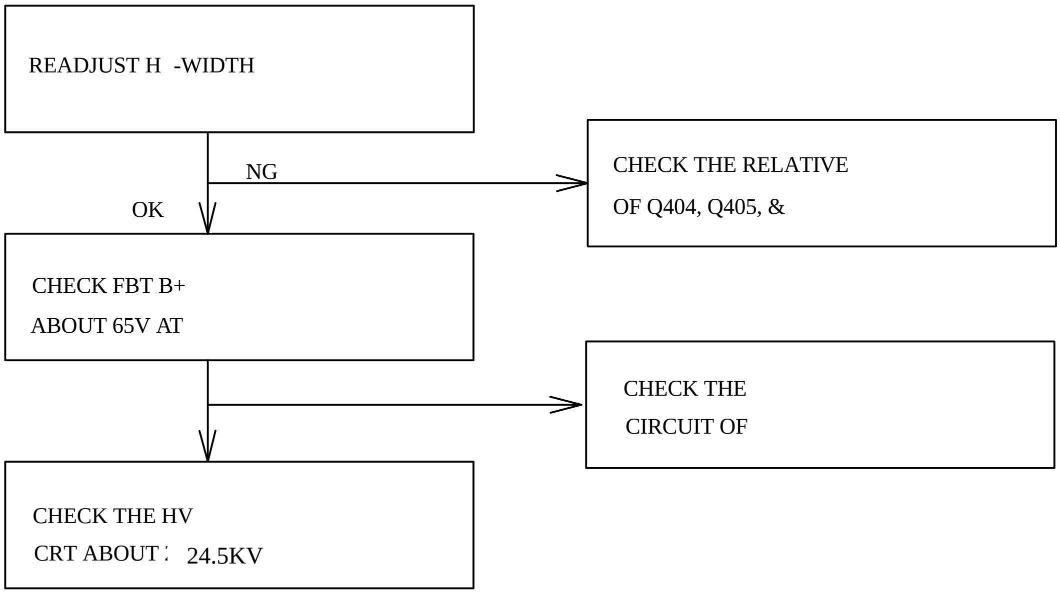
6-4 HOR./OSC/DEF/HV CIRCUIT FAULT

1. NO RASTER (DISCONNECT WITH SIGNAL CABLE)



6-5 ABNORMAL HORIZONTAL DEFLECTION

1. ABNORMAL HORIZONTAL WIDTH OF VIDEO



2. ABNORMAL HORIZONTAL VIDEO CENTER

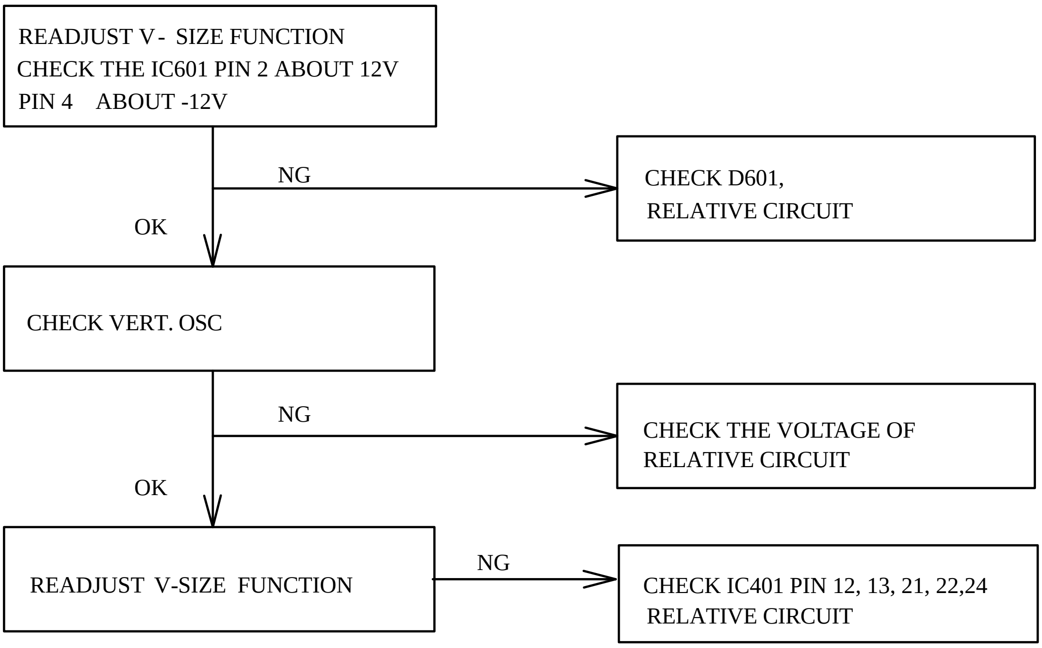
CHECK IC401 PIN 29
RELATIVE CIRCUIT

3. ABNORMAL HORIZONTAL LINEARITY

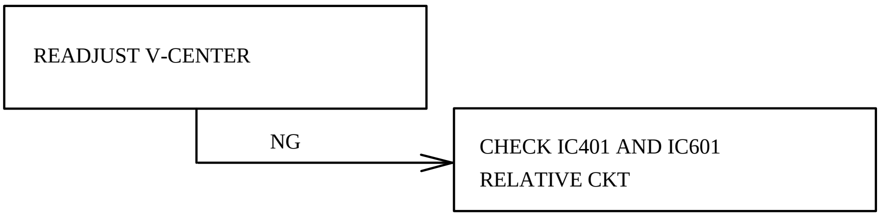
CHECK L401, Q426, Q428,Q431

6-6 ABNORMAL VERTICAL SCANNING

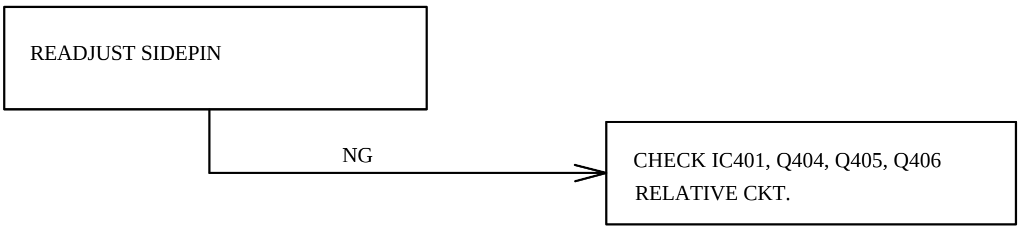
1. ABNORMAL VERTICAL SIZE



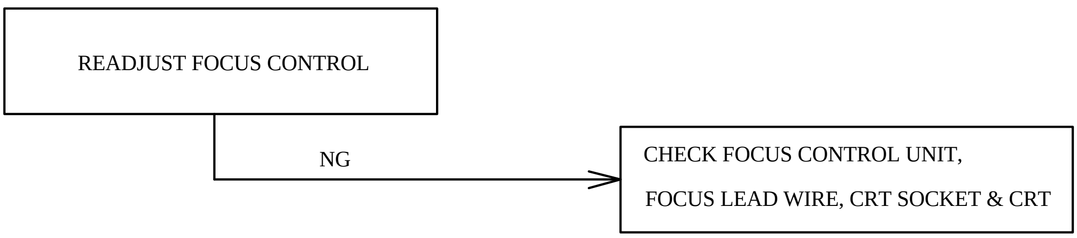
2. VERTICAL CENTER



6-7 SIDE-PIN CUSHION DISTORTION

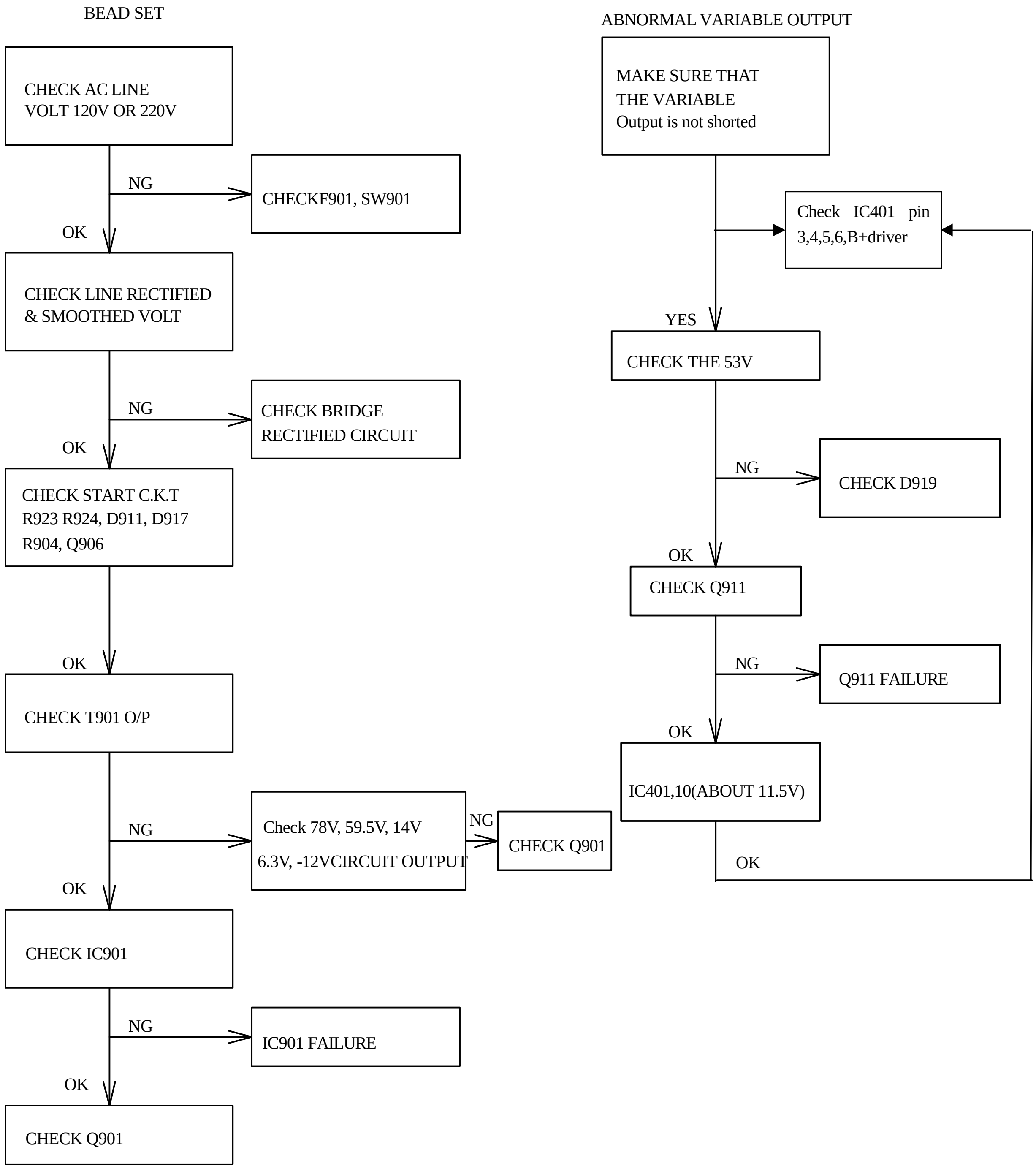


6-8 POOR FOCUS



6-9 POWER SUPPLY TROUBLE SHOOTING CHART

BEFORE CHECK SW.REG. PLEASE REFER TO THE POWER SUPPLY BLOCK DIAGRAM
POWER SUPPLY OUTPUT: (A) VARIABLE OUTPUT : 58. V - 14V
(DEPENDING EPENDING UPON H.SYNC FREQUENCY)
(B) CONSTANT OUTPUT : 6.3V, 12V, -12V, 80V



7. Recommended Spare Parts List

E70-11 RSPL

Item	ViewSonic P/N	Reference P/N	Description	Location	Universal number#	Q'ty	Lead time
1	B-MB-0201-2735	CMS773Z1NVO	Main Bord (with component)			1	60
2	B-VB-0202-0357	CRS773Z1NVW	Video Board (with component)			1	60
3	A-UG-0107-0498	41A6870913A	QSG			1	10
4	A-CD-E70-11	70A7747091A	CD Manual			1	10
5	E-IC-0401-2112	56A37912	POWER CONTROL IC	IC901	UC3842	1	60
6	E-IC-0401-4017	56A1125-552-X	OTP MCU	IC101	NT68F63U	1	60
7	E-IC-0450-0039	56A1133-13	EEPROM	IC102	24LC08	1	60
8	E-IC-0401-1880	56A5522	Horizontal Deflect IC	IC401	TDA4841PS	1	60
9	E-IC-0401-4018	56A5841A	Vertical Deflect IC	IC601	TDA4863A/	1	60
10	E-IC-0401-4019	56A366509	Video Preamplify IC	IC801	LM1246DKA	1	60
11	E-IC-0401-4020	56A551524	Video Amplify IC	IC802	LM2470TA	1	60
12	E-IC-0401-2060	56A5396	Video Bias Control IC	IC803	LM2480NA	1	60
13	E-Q-0402-1457	57A7246	POWER MOSFET	Q901	STP7NC70ZFP	1	60
14	E-Q-0402-1508	57A60027	B+ CONTROL MOSFET	Q911	IRF634B	1	60
15	E-D-0403-1883	93A5255P52T	AC Rectifier Diode	D901~D904	1N5408	1	60
16	E-D-0403-1945	93A1060652T	100V Rectifier Diode	D918	BYV26C	1	60
17	E-D-0403-1882	93A3040-8T	16V Rectifier Diode	D922	RG-4	1	60
18	E-D-0403-1945	93A1060-6-52T	B+ Rectufuer Diode	D919	RG-4	1	60
19	E-D-0403-2800	93A1002-1P-52T	DAMPER	D405	1N5817	1	8weeks
20	E-Q-0402-7024	57A706505	HOUTPUT TRANSISTOR	Q403	2SC5929	1	8weeks
21	E-Q-0402-0576	57A4151	H-Size Control	Q406	TIP122/Fairchild	1	60
22	E-Q-0402-7029	57A60014	CS Mosfet	Q426/Q428/Q431	CEPF630	1	60
23	E-T-0408-0523	79A167125LS	H-Driver Transformer	T401		1	30
24	E-FBT-0406-0629	79A763-B504	FBT	T402		1	30
25	E-L-0407-1605	79A167-126-HA	LINEARITY COIL	T403		1	60
26	E-T-0408-0524	80AS763-1-NF	Power Transformer	T901		1	30
27	E-L-0407-1398	61A52-27-4G	Deguass Resistor	PR901		1	50
28	E-L-0407-1401	61A58-8T-L	Start-up Resistor	NR901		1	50
29	E-FS-0410-0117	84A7H-400-SL	FUSE	F901		1	50
30	E-CRT-0409-0476	750A5852-1AV	CRT			1	60
31	A-PC-0106-0282	89A402L18NYH	Power cord for E70-11P			1	4weeks
32	A-PC-0106-0195	89A412L18NIS	Power cord for E70-11A			1	4weeks
33	A-PC-0106-0215	89A404L18NYH	Power cord for E70-11E			1	4weeks
34	C-FP-0301-1023	34A799-AF0-A		Bezel		1	2
35	C-BC-0302-0609	34A762-F0-1A		Rear Cover		1	2
36	C-BS-0303-0538	34A741-F0-L		Base		1	2
37	C-BS-0303-0539	34A740-F0-L		Swivel		1	2
38	M-MS-0808-7479	23A31821		Bird Logo		1	20
39	P-FM-0602-0892	44A67B4-1	1 of 2	EPS Cushion		1	7
40	P-FM-0602-0893	44A67B4-2	2 of 2			1	

E70-11 BOM

Item	ViewSonic P/N	Reference P/N	Description	Location	Q'ty	Universal number#
1	#N/A	1A5035T47	SCREW FOR CRT		4	
2	M-MS-0808-7415	5A388	RUBBER WASHER		4	
3	M-MS-0808-7367	11A112500	WIRE MOUNT		1	
4	#N/A	11A115500	FBT CLIP		1	
5	#N/A	11A60331	PCB SUPPORT		2	
6	M-MS-0808-7370	12A3851	RUBBER FOOT		0	
7	M-MS-0808-7373	19A4037	STEEL		1	
8	M-MS-0808-7374	19A5062	STEEL WIRE SPRING		0	
9	M-MS-0808-7479	23A31821	Logo		1	
10	M-MS-0808-7381	33A4020YA	S.C.CAP		1	
11	M-MS-0808-7383	33A41131	LENS		1	
12	PL-NB-0707-0186	33A4114F0A	POWER KNOB		1	
13	M-MS-0808-8846	33A69111	CRT SUPPORT		1	
14	PL-TB-0717-0109	34A740F0L	SWIVEL		1	
15	PL-PS-0715-0193	34A741F0L	BASE		1	
16	#N/A	34A762F01A	BACK COVER		1	
17	C-FP-0301-0887	34A799AF0A	FRONT PANEL		1	
18	#N/A	40A153171A	CRT Warning Label		1	
19	M-LB-0813-0611	40A1545011	HI-POT GND LABEL		1	
20	#N/A	40A45760819A			1	
21	M-LB-0813-0628	40A58126704			0	
22	M-LB-0813-0615	40A58162410A	H/V LABEL		1	
23	M-LB-0813-0618	40A5817091A	CARTON LABEL		1	
24	#N/A	40A58170915A			3	
25	#N/A	40A58170918D	PALLET LABEL		0	
26	#N/A	40A206870915A	ID LABEL		1	
27	M-MS-0808-7386	41A68508A			0	
28	A-UG-0107-0498	41A6870913A	QUICK SET UP GUIDE		1	
29	M-MS-0808-7387	44A600045B			0	
30	M-MS-0808-7388	44A600046B			0	
31	#N/A	44A60027166A			0	
32	#N/A	44A60027167A			0	
33	#N/A	44A67547094A	CARTON		1	
34	#N/A	44A67B41	EPS		1	
35	#N/A	44A67B42	EPS		1	
36	#N/A	44A9003210			0	
37	M-MS-0808-8312	45A7628V3	PE BAG FOR MANUAL		1	
38	M-MS-0808-8313	45A7634RN	PE BAG FOR BASE		0	
39	M-MS-0808-7393	45A773			8	
40	M-MS-0808-7394	45A77500	BARCODE RIBBON		9	
41	M-MS-0808-7395	45A77501	BARCODE RIBBON		2	
42	M-MS-0808-8315	45A887RN	Monitor PE BAG		1	
43	#N/A	45A8850032	PALLET PE BAG		0	
44	#N/A	45A8850033	PALLET PE BAG		0	
45	M-MS-0808-7396	49A511A			3	
46	M-MS-0808-7397	50A45			0	
47	M-MS-0808-7398	50A5001			9	
48	#N/A	50A500500	CABLE TIE		1	
49	M-MS-0808-7401	50A5022	PLASTIC TIE		2	
50	M-MS-0808-7402	50A5025	CABLE TIE		1	
51	#N/A	51A214			3	
52	M-MS-0808-7405	51A64	SILICON		9	
53	#N/A	51A5001			0	
54	M-MS-0808-7406	52A1150C	TAPE		5	
55	M-MS-0808-7407	52A1185	MIDDLE TAPE FOR CARTON		8	
56	M-MS-0808-7408	52A11851	BIG TAPE		0	
57	M-MS-0808-7409	52A1186	SMALL TAPE		8	
58	#N/A	52A1211502	AL TAPE		1	
59	M-MS-0808-7411	52A2191A			4	

Item	ViewSonic P/N	Reference P/N	Description	Location	Q'ty	Universal number#
60	#N/A	52A60166501			2	
61	#N/A	52A60171			0	
62	M-MS-0808-7413	55A1005			9	
63	M-MS-0808-7414	55A2001			1	
64	A-CD-E70-11	70A7747091A	CD MANUAL		1	
65	#N/A	85A6020500	GROUNDED PLATE		2	
66	#N/A	85A60271	Shield Case		1	
67	#N/A	85A6028500	SHIELD CASE		1	
68	A-PC-0106-0287	89A404L18NIS	POWER CORD		1	
69	A-PC-0106-0215	89A404L18NYH	POWER CORD		0	
70	#N/A	95A91205646			1	
71	#N/A	95A205T3005A	WIRE	AS1	1	
72	#N/A	95A2070521	COPPER BRAID		1	
73	M-SCW-0824-0610	B1A103510128	SCREW 3.5X10		1	
74	M-SCW-0824-0612	D1A11407128	SCREW 4X7(FOR AC)		2	
75	M-SCW-0824-0616	Q1A34016128	SCREW		4	
76	E-L-0407-1482	750A1697504JA	0.35*90Ts Deg.coil		1	
77	#N/A	W33A4112F0A	KEY PAD (??)		1	
78	#N/A	AMS773Z1NVW	MAIN OBARD FOR S773Z-1V		1	
79	M-SCW-0824-0607	1A4214128	SCREW FOR ? ? 8 ? ?		2	
80	M-MS-0808-7437	9A2112	PIN 1.2X15MM	TP401	1	
81	M-MS-0808-7371	15A56401A	B AL GND LUG		1	
82	M-MS-0808-7375	33A30741	2P PLUG	CN902	1	
83	M-LB-0813-0614	40A58126702	FAIL-SAFE LABEL		1	
84	#N/A	40A5816242B	CHASSIS LABEL		1	
85	#N/A	51A5001			2	
86	M-MS-0808-7412	55A14	SOLDER BAR		0	
87	#N/A	55A1002	SOLDER BAR		1	
88	E-IC-0401-2112	56A37912	8PIN IC UC3842AM/LIN	IC901	1	UC3842AM
89	E-IC-0401-1880	56A5522	TDA4841PS/PHILIPS	IC401	1	TDA4841PS
90	#N/A	56A1125552X	NT68F63U	IC101	1	NT68F63U
91	#N/A	56A113313	A 24LC08 B/P EEPROM MICRO	IC102	1	24LC08
92	E-Q-0402-1492	57A7283	HSB772P/HSB772E HI-SINC	Q907	1	HSB772
93	#N/A			Q909	1	
94	E-L-0407-1398	61A52274G	PTCR 9OHM+-20% 220V GAO	PR901	1	
95	#N/A	61A52274J	PTCR	PR901	0	
96	#N/A	61A20812164	MOFR 120 OHM +-5% 1W	R606	1	
97	#N/A	61A20815964	MOFR 1.5 OHM +-5% 1W	R607	1	
98	#N/A	61A20822164	MOFR 220 OHM +-5% 1W	R991	1	
99	#N/A	61A20847164	MOFR 470 OHM +-5% 1W	R907	1	
100	E-R-0405-3922	61A152M10064	MOFR 10 OHM+-5% 2W	R407	1	
101	#N/A	61A152M20364	MOFR 20KOHM+-5% 2W	R904	1	
102	#N/A	61A152M22164	MOFR 220 OHM+-5% 2W	R610	1	
103	#N/A	61A152M22864	MOFR 0.22 OHM+-5% 2W	R929	1	
104	#N/A	61A152M22964	MOFR 2.2 OHM +-5% 2W	R608	1	
105	#N/A	61A152M33964	MOFR 3.3 OHM+-5% 2W	R921	1	
106	#N/A	61A152M47164	MOFR 470 OHM +-5% 2W	R989	1	
107	E-R-0405-5963	61A153M33359	MOFR 33K OHM +-5% 3W	R927	1	
108	#N/A	61A153M56059	MOFR 56 OHM +-5% 3W	R426	1	
109	#N/A	61A153M68859	MOFR 0.68 OHM +-5% 3W	R428	1	
110	E-SP-0417-0097	62A1016J	SPARK GAP 1KV +500-100V	SG489	1	SPARK GAP
111	#N/A	63A107K334U	MPX 0.33UF,275VAC,+-10%	C902	1	
112	#N/A	63A107K474U	CAP SAFETY 0.47U 20% AC	C905	1	
113	#N/A	63A210J1042CU	0.1UF 250V	C426	1	
114	#N/A	63A210J2442CC	0.24uF 250V	C416	0	
115	#N/A	63A210J2442CM	0.24UF 250V PMH BY MYLA	C416	0	
116	#N/A	63A210J2442CU	0.24UF 250V	C416	1	
117	#N/A	63A210J2743CU	.27UF 5% 400V FOR CAMEL	C425	1	
118	#N/A	63A210J4742CU	0.47UF/250V	C438	1	
119	E-C-0404-4603	64A100J22559	2.2UF +-5% 100V	C422	1	

Item	ViewSonic P/N	Reference P/N	Description	Location	Q'ty	Universal number#
120	#N/A	64A178J7541A	0.75U 100V	C706	1	
121	#N/A	65A1K4721A6921	4700PF 1KV	C421	1	
122	#N/A	65A2M1033B6921	0.01UF 2KV 20% Z5U	C915	1	
123	#N/A	65A305M1022B2	1000PF 蹲勾 400VAC/250V	C961	1	
124	#N/A	65A305M1032BH	0.01UF 400V	C971	1	
125	E-C-0404-4626	65A305M3322B2	3300PF 250VAC/400VAC	C964	1	
126	#N/A	65A305M3322B3	CS13-E2GA332MYNS	C964	0	
127	#N/A	65A305M4722BH	Y2 4700PF +-20% 250VAC/	C962	1	
128	#N/A			C963	1	
129	#N/A	67A3022114D	220UF +-20% 400V HEC	C907	1	
130	E-C-0404-0955	67A3022114K	220UF +-20% 400V ELITE	C907	0	
131	#N/A	67A3022114X	220UF +-20% 400V	C907	0	
132	#N/A	67A215391GFH	390UF +-20% 80V HERMEI	C931	0	
133	#N/A	67A215391GFK	390UF +-20% 80V ELITE	C931	1	
134	#N/A	67A21547011F	47UF+-20%200V	C951	1	
135	#N/A	67A21547011K	47UF +-20% 200V ELITE	C951	0	
136	#N/A	67A3051024	1000UF +-20% 25V	C936	1	
137	#N/A			C942	1	
138	E-C-0404-4654	67A30510915	1UF +-20% 450V	C740	1	
139	#N/A	67A30522012	22UF +-20% 250V	C713	1	
140	#N/A	67A30547011	47UF +-20% 200V	C439	1	
141	#N/A	67A3091023	1000UF +-20% 16V	C938	1	
142	#N/A	67A3092223	2200UF +-20% 16V	C411	1	
143	E-L-0407-1473	71A552	A FERRITE BEAD 6.5*5*1.7	DF923	1	
144	#N/A	71A552A	FERRITE BEAD 3*5*1.5	DF901 DF902 DF903 DF904 DF919 DF925	2	
145	#N/A				2	
146	#N/A				2	
147	#N/A				2	
148	#N/A				2	
149	#N/A				1	
150	#N/A				1	
151	#N/A	71A5521	B FERRITE BEAD 10*6.0*0.8	FB910	1	
152	#N/A			FB911	1	
153	#N/A	71A1008	FERRITE CORE 12*25*15		1	
154	#N/A	73A147530HA	LINEARITY COIL	L401	1	
155	#N/A	73A1747S	LINE FILTER	L901	1	
156	#N/A	73A1747T	LINE FILTER 25MH MIN	L901	0	
157	#N/A	73A25369H	150uH+-10% HAIAN	L405	0	
158	#N/A	73A25369S	CHOCK	L405	0	
159	#N/A	73A25369T	150UH +-10% FOR TDK	L405	1	
160	#N/A	73A25388HB	CHOCK	L906	1	
161	#N/A	73A25388SB	CHOCK	L906	0	
162	#N/A	73A25388TB	CHOCK	L906	0	
163	#N/A	73A25388LSB	CHOCK	L906	0	
164	E-R-0405-6798	75A335101	CFVR 100 OHM +-20%	VR903	1	
165	E-R-0405-6800	75A335204	CFVR 200K OHM +-20%	VR704	1	
166	#N/A	75A335303	CFVR 30K OHM +-20%	VR902	1	
167	#N/A	77A2607W	RELAY	RY901	1	RELAY
168	M-SW-0815-0201	77A6021CJ	TACT SWITCH TSVB-2	(SW101)	1	
169	#N/A			(SW102)	1	
170	#N/A			(SW103)	1	
171	#N/A			(SW104)	1	
172	M-SW-0815-0208	77A411A2S	PUSH SWITCH	SW901	0	
173	M-SW-0815-0200	77A411A2CJ	MINI SWITCH	SW901	1	
174	#N/A	79A167125T	DRIVE TRANSFORMER	T401	0	
175	E-T-0408-0523	79A167125LS	DRIVER TRANSFORMER	T401	1	
176	#N/A	79A167126HA	FOUCS	T403	1	
177	#N/A	79A167126LSA	FOCUS DRIVER	T403	0	
178	#N/A	79A763B504	FBT	T402	1	FBT
179	#N/A	80AS7631NF		T901	1	

Item	ViewSonic P/N	Reference P/N	Description	Location	Q'ty	Universal number#
180	#N/A	81A102GGP	LED	LED2	1	LED
181	M-MS-0808-7419	84A3310	FUSE CLIP	F901	2	
182	E-FS-0410-0010	84A7H400SL	FUSE 4A 250V LF-618 004	F901	1	FUSE
183	#N/A	85A5881			1	
184	#N/A	89A174L8ECBB2	SIGNAL CABLE		1	
185	#N/A	89A174L8ECCB2	SIGNAL CABLE		0	
186	#N/A	89A174L8ECGB2	SIGNAL CABLE		0	
187	E-D-0403-1883	93A5255P52T	1N5408 PEC	D901	1	1N5408
188	#N/A			D902	1	
189	#N/A			D903	1	
190	#N/A			D904	1	
191	E-D-0403-2093	93A2020552T	ER202	D923	1	ER202
192	#N/A	95A900560		(GND2)	1	
193	#N/A			GND1	1	
194	M-WR-0828-5991	95A205T3006A	Wire Harness	SS1	1	
195	#N/A	95A80136604	HARNESS	H803	1	
196	#N/A	95A801312619	WIRE HARNESS	H802	1	
197	M-SCW-0824-0614	M1A11406128	SCREW		1	
198	#N/A	705A761PC8702V	AC SOCKET		1	
199	#N/A	705A763XC565A	X101 ASS'Y		1	
200	#N/A	705A763XC571A	Q911 ASS'Y		1	
201	#N/A	705A763XC572A	Q403/Q406/D408/HV1 ASS'		1	
202	#N/A	705A763XC573A	Q901 ASS'Y		1	
203	#N/A	705A763ZC576A	Q428 ASS'Y		1	
204	#N/A	705A763ZC6101	NR901 ASS'Y		1	
205	#N/A	705A763ZC8701A	AC ASS'Y		1	
206	#N/A	705A773ZC5602P	IC601 ASS'Y		1	
207	#N/A	705A773ZC5707A	Q431 ASS'Y		1	
208	#N/A	705A773ZC9301V	D919 ASS'Y		1	
209	#N/A	750A58527731MV	17" CPT CRT TCO ASS'Y		0	
210	#N/A	750A58527731TV	17" CPT CRT FOR MPRII A		0	
211	M-MS-0808-7416	6A314	BRASS		0	
212	#N/A	6A31500	EYELET		4	
213	#N/A	6A31501	BRASS		3	
214	#N/A	6A31502	BRASS		8	
215	E-Q-0402-1327	57A419PPT	2PC945P	Q401	1	2PC945P
216	#N/A			Q701	1	
217	#N/A			Q910	1	
218	#N/A	57A419503T	3DG945P	Q130	1	3DG945P
219	#N/A			Q407	1	
220	#N/A			Q408	1	
221	#N/A			Q409	1	
222	#N/A			Q903	1	
223	#N/A			Q906	1	
224	#N/A			Q908	1	
225	#N/A			Q913	1	
226	#N/A			Q931	1	
227	#N/A	57A420502T	3CG733P	Q404	1	3CG733P
228	#N/A			Q405	1	
229	#N/A			Q905	1	
230	#N/A	57A446500T	3DG1213C	Q902	1	3DG1213C
231	#N/A			Q912	1	
232	#N/A			Q921	1	
233	#N/A	57A446501T	2SC2120Y	Q918	1	2SC2120Y
234	E-Q-0402-0450	57A4981T	TRAN BF423 TAPING PHILI	Q705	1	BF423
235	#N/A	57A594504T	KSP44TA	Q904	1	KSP44TA
236	E-Q-0402-1257	57A6191T	2SA673AC/HITACHI	Q920	1	2SA673AC
237	#N/A	57A7081T	2SC4002E	Q742	1	2SC4002E
238	E-Q-0402-1493	57A7311AT	2SK2962	Q402	0	2SK2962
239	#N/A	57A7311BT	STQ1NE10L-AP	Q402	1	STQ1NE10L-AP

Item	ViewSonic P/N	Reference P/N	Description	Location	Q'ty	Universal number#
240	#N/A	61A58301WT	NTCR 300OHM +-5%3800K T	NR615	1	
241	#N/A	61A17139352T	CFR 39K OHM +-2% 1/4W	R940	1	
242	E-R-0405-5879	61A17210052T	CFR 10OHM+-5% 1/4W	R906	1	
243	#N/A			R965	1	
244	E-R-0405-3175	61A17210352T	CFR 10KOHM +-5% 1/4W	R134	1	
245	#N/A			R176	1	
246	#N/A			R447	1	
247	#N/A			R450	1	
248	#N/A			R982	1	
249	E-R-0405-3185	61A17210452T	CFR100K OHM +-5% 1/4W	R411	1	
250	#N/A			R466	1	
251	#N/A			R474	1	
252	#N/A			R735	1	
253	#N/A			R749	1	
254	#N/A			R971	1	
255	#N/A	61A17212252T	CFR 1.2K OHM +-5% 1/4W	R968	1	
256	#N/A	61A17213352T	CFR 13K OHM +-5% 1/4W	R616	1	
257	#N/A		CFR 13K OHM +-5% 1/4W	R705	1	
258	E-R-0405-6067	61A17215152T	CFR 150 OHM +-5% 1/4W	R937	1	
259	#N/A			R941	1	
260	#N/A			R979	1	
261	#N/A	61A17215252T	CFR 1.5K OHM +-5% 1/4W	R613	1	
262	E-R-0405-5884	61A17215452T	CFR 150K OHM +-5% 1/4W	R438	1	
263	#N/A			R453	1	
264	#N/A	61A17216252T	CFR 1.6K OHM +-5% 1/4W	R433	1	
265	E-R-0405-2396	61A17218252T	CFR 1.8K OHM +-5% 1/4W	R914	1	
266	E-R-0405-4477	61A17220352T	CFR 20KOHM+-5% 1/4W	R939	1	
267	#N/A	61A17220552T	CFR 2MOHM+-5% 1/4W	R401	1	
268	E-R-0405-5887	61A17222052T	CFR 22OHM+-5% 1/4W	R938	1	
269	#N/A	61A17222152T	CFR 220OHM+-5% 1/4W	R951	1	
270	#N/A			R980	1	
271	E-R-0405-3072	61A17222252T	CFR 2.2KOHM+-5% 1/4W	R703	1	
272	#N/A	61A17224252T	CFR 2.4KOHM+-5% 1/4W	R440	1	
273	#N/A			R915	1	
274	#N/A	61A17230352T	CFR 30KOHM+-5% 1/4W	R953	1	
275	#N/A	61A17233452T	CFR 330K OHM +-5% 1/4W	R935	1	
276	#N/A	61A17236152T	CFR 360 OHM +-5% 1/4W	R985	1	
277	#N/A	61A17239252T	CFR 3.9K OHM +-5% 1/4W	R602	1	
278	#N/A	61A17243252T	CFR 4.3K OHM +-5% 1/4W	R604	1	
279	E-R-0405-2320	61A17247152T	CFR 470OHM +-5% 1/4W	R126	1	
280	#N/A			R709	1	
281	E-R-0405-3217	61A17247352T	CFR 47K OHM +-5% 1/4W	R443	1	
282	#N/A			R912	1	
283	#N/A			R952	1	
284	#N/A			R957	1	
285	#N/A			R960	1	
286	#N/A	61A17251252T	CFR 5.1K OHM +-5% 1/4W	R708	1	
287	#N/A	61A17256052T	CFR 56 OHM +-5% 1/4W	R962	1	
288	E-R-0405-5937	61A17268052T	CFR 68 OHM +-5% 1/4W	R942	1	
289	#N/A	61A20010452T	MFR 100KOHM+-1% 1/4W	R715	1	
290	#N/A	61A20010952T	MFR 1OHM+-1% 1/4W	R931	1	
291	#N/A			R943	1	
292	#N/A	61A21010252T	MFR 1K OHM +- 1% 1/6W	R117	1	
293	E-R-0405-6774	61A21012252T	MFR 1.2K OHM +- 1% 1/6W	R402	1	
294	#N/A	61A21013252T	MFR 1.3K OHM +- 1% 1/6W	R414	1	
295	#N/A	61A21022252T	MFR 2.2K OHM +- 1% 1/6W	R436	1	
296	E-R-0405-6776	61A21022352T	MFR 22K OHM +- 1% 1/6W	R421	1	
297	E-R-0405-6778	61A21027252T	MFR 2.7K OHM +- 1% 1/6W	R483	1	
298	#N/A	61A21039252T	MFR 3.9K OHM +- 1% 1/6W	J118	1	
299	#N/A			R125	1	

Item	ViewSonic P/N	Reference P/N	Description	Location	Q'ty	Universal number#
300	#N/A			R127	1	
301	#N/A	61A21039352T	MFR 39K OHM +- 1% 1/6W	R490	1	
302	#N/A	61A21068152T	MFR 680OHM +-1% 1/6W	R120	1	
303	#N/A	61A21068252T	MFR 6.8KOHM +-1% 1/6W	R128	1	
304	#N/A	61A21075252T	MFR 7.5KOHM +-1% 1/6W	R116	1	
305	#N/A	61A21091152T	MFR 910OHM +-1% 1/6W	D705	1	
306	E-R-0405-6517	61A60210052T	CFR 10 OHM +-5% 1/6W	R105	1	
307	#N/A			R111	1	
308	#N/A			R112	1	
309	#N/A			R492	1	
310	#N/A			R493	1	
311	#N/A			R494	1	
312	E-R-0405-6520	61A60210352T	CFR 10K OHM+-5% 1/6W	R143	1	
313	#N/A			R153	1	
314	#N/A			R420	1	
315	#N/A			R431	1	
316	#N/A			R435	1	
317	#N/A			R972	1	
318	#N/A	61A60211252T	CFR 1.1K OHM+-5% 1/6W	R452	1	
319	#N/A	61A60213252T	CFR 1.3K OHM +-5% 1/6W	R934	1	
320	E-R-0405-6222	61A60213352T	CFR 13K OHM +-5% 1/6W	R748	1	
321	E-R-0405-6523	61A60215352T	CFR 15K OHM+-5% 1/6W	R405	1	
322	#N/A			R413	1	
323	#N/A			R437	1	
324	#N/A	61A60218252T	CFR 1.8K OHM+-5% 1/6W	R950	1	
325	#N/A	61A60220252T	CFR 2K OHM+-5% 1/6W	R417	1	
326	E-R-0405-6530	61A60220352T	CFR 20K OHM+-5% 1/6W	R423	1	
327	E-R-0405-6531	61A60222152T	CFR 220 OHM +-5% 1/6W	R406	1	
328	#N/A			R410	1	
329	E-R-0405-6782	61A60222252T	CFR 2.2K OHM +-5% 1/6W	R913	1	
330	#N/A	61A60230052T	CFR 30 OHM+-5% 1/6W	R439	1	
331	#N/A			R707	1	
332	#N/A	61A60230352T	CFR 30K OHM+-5% 1/6W	R419	1	
333	#N/A	61A60233152T	CFR 330 OHM+-5% 1/6W	R712	1	
334	E-R-0405-6544	61A60233252T	CFR 3.3K OHM+-5% 1/6W	R409	1	
335	#N/A			R706	1	
336	#N/A	61A60239252T	CFR 3.9K OHM+-5% 1/6W	R434	1	
337	#N/A	61A60251252T	CFR 5.1K OHM+-5% 1/6W	R135	1	
338	#N/A			R136	1	
339	E-R-0405-6555	61A60256252T	CFR 5.6KOHM+-5% 1/6W	R444	1	
340	#N/A			R713	1	
341	E-R-0405-6315	61A60256352T	CFR 56K OHM +-5% 1/6W	R471	1	
342	E-R-0405-6794	61A60262252T	CFR 6.2K OHM +-5% 1/6W	R905	1	
343	E-R-0405-6585	61A60268252T	CFR 6.8K OHM+-5% 1/6W	R970	1	
344	E-R-0405-6797	61A60291352T	CFR 91K OHM +-5% 1/6W	R910	1	
345	E-R-0405-5763	61A175L10052T	CFR 10 OHM +-5% 1/2W	R429	1	
346	#N/A			R605	1	
347	E-R-0405-6678	61A175L10152T	CFR 100 OHM +-5% 1/2W	R752	1	
348	#N/A			R981	1	
349	E-R-0405-5764	61A175L10252T	CFR 1K OHM +-5% 1/2W	R424	1	
350	#N/A			R442	1	
351	#N/A			R738	1	
352	E-R-0405-6679	61A175L10552T	CFR 1M OHM +-5% 1/2W	R746	1	
353	E-R-0405-6767	61A175L15052T	CFR 15 OHM +-5% 1/2W	R908	1	
354	E-R-0405-6768	61A175L15452T	CFR 150KOHM+-5% 1/2W	R741	1	
355	#N/A	61A175L20352T	CFR 20K OHM +-5% 1/2W	R740	1	
356	E-R-0405-5767	61A175L22052T	CFR 22 OHM +-5% 1/2W	R427	1	
357	#N/A	61A175L22152T	CFR 220 OHM +-5% 1/2W	R721	1	
358	#N/A	61A175L22852T	CFR 0.22 OHM +-5% 1/2W	R620	1	
359	#N/A	61A175L39352T	CFR 39K OHM +-5% 1/2W	R418	1	

Item	ViewSonic P/N	Reference P/N	Description	Location	Q'ty	Universal number#
360	#N/A	61A175L47352T	CFR 47K OHM +-5% 1/2W	R925	1	
361	E-R-0405-2382	61A175L47452T	CFR 470K OHM +-5% 1/2W	R901	1	
362	E-R-0405-3482	61A175L47952T	CFR 4.7 OHM +-5% 1/2W	R612	1	
363	#N/A	61A175L75352T	CFR 75K OHM +-5% 1/2W	R747	1	
364	#N/A	61A175L82352T	CFR 82K OHM +-5% 1/2W	R441	1	
365	#N/A	61A212Y10452T	MGFR 100KOHM +-5% 1/2W	R725	1	
366	E-R-0405-6779	61A212Y10552T	MGFR 1M OHM+-5% 1/2W	R928	1	
367	E-R-0405-6803	61A212Y10652T	10MOHM +-5% 1/2W 妮	R900	1	
368	#N/A	61A212Y62352T	62KOHM 1/2W	R702	1	
369	#N/A	61A214Y12552T	MGFR 1.2MOHM +-5% 1/4W	R704	1	
370	#N/A	61A214Y47452T	MGFR 470K OHM +-5% 1/4W	R923	1	
371	#N/A			R924	1	
372	#N/A	61A214Y82352T	MGFR 82K OHM +-5% 1/4W	R969	1	
373	#N/A	63A212J2232AT	22NF 250V +-5%	C404	1	
374	#N/A	64A44J1021AT	1000PF 100V PEI	C920	1	
375	#N/A	64A44J1031AT	.01UF +-5% 100V	C463	1	
376	#N/A	64A44J3321AT	3300PF 100V PEI	C918	1	
377	#N/A	64A44J4721AT	4700PF 100V PEI	C415	1	
378	E-C-0404-4611	64A45G1031AT	.01UF +-2% 100V	C403	1	
379	#N/A	64A176J1042T	.1UF +-5% 250V	C710	0	
380	#N/A	64A176J1540T	0.15UF +-5% 63V/50V	C417	0	
381	E-C-0404-4607	64A176J2240T	.22UF +-5% 63V	C437	1	
382	#N/A	64A176J2241T	0.22UF +-5% 100V	C604	0	
383	#N/A	64A176J3340T	0.33UF 5% 50V/63V	C959	0	
384	#N/A	64A176J4731T	0.047UF +-5% 100V	C436	0	
385	#N/A	64A176J4741T	.47UF +-5% 100V	C405	0	
386	#N/A			C414	0	
387	#N/A	64A176J8231T	.082UF +-5% 100V	C610	0	
388	#N/A	64A178J1040T	CL21X0.1UF 63V +-5%	C401	1	
389	#N/A	64A178J1042T	.1UF 250V	C710	1	
390	#N/A	64A178J1540T	CL21X 0.15UF 63V +-5%	C417	1	
391	#N/A	64A178J2241T	C121X 0.22UF 100V +-5%	C604	1	
392	#N/A	64A178J3340T	0.33uf 63V	C959	1	
393	#N/A	64A178J4731T	0.047UF	C436	1	
394	#N/A			C460	1	
395	#N/A	64A178J4732T	C121X 0.047UF 250V +-5%	C428	1	
396	#N/A	64A178J4740T	CL21X. 0.47UF 63V +-5%	C405	1	
397	#N/A			C408	1	
398	#N/A	64A178J4741T	C121X 0.47UF 100V +-5%	C414	1	
399	#N/A	64A178J8221T	CL21X 8200PF 100V +-5%	C466	1	
400	#N/A	64A178J8231T	CL21X 0.082UF 100V +-5%	C610	1	
401	E-C-0404-4612	64A700J1020AT	PEN 0.001UF/50V +-5%	C601	1	
402	E-C-0404-4613	64A700J1030AT	0.01UF 50V +-5%	C406	1	
403	#N/A			C965	1	
404	E-C-0404-4614	64A700J1040AT	0.1uF/50V +-5%	C413	1	
405	#N/A			C921	1	
406	#N/A			C941	1	
407	#N/A	64A700J2220AT	2.2nF 50V +-5%	C958	1	
408	E-C-0404-4615	64A700J3320AT	3.3nF/50V +-5%	C602	1	
409	#N/A			C924	1	
410	E-C-0404-4617	64A700J8220AT	8200PF/50V +-5%	C402	1	
411	E-C-0404-4619	64A701J2240AT	0.22uF/50V +-5%	C611	1	
412	#N/A	65A1K2215T	220PF/1KV Y5P+-10%	C430	1	
413	#N/A	65A1K3315T6052	330PF/1KV Y5P+-10%	C927	1	
414	#N/A	65A1K3315T6921	330PF/1KV Y5P+-10%	C923	1	
415	#N/A	65A1K4715T6921	470PF +-10% 1KV Y5P	C703	1	
416	#N/A	65A44222013T	22PF +-5% NPO 50V	C108	1	
417	#N/A			C109	1	
418	#N/A	65A4441525T	1500PF 10% Y5P 50V	C607	1	
419	#N/A	65A4443315T	330PF 10% 50V	C741	1	

Item	ViewSonic P/N	Reference P/N	Description	Location	Q'ty	Universal number#
420	#N/A	65A4443325T	3300PF 10% 50V Y5P	C429	1	
421	#N/A			C445	1	
422	#N/A			C470	1	
423	#N/A	65A4501043T	0.1UF 50V	C105	1	
424	E-C-0404-4649	67A3051007T	10UF +-20% 50V	C462	1	
425	#N/A	67A3051013T	100UF +-20% 16V	C104	1	
426	#N/A	67A3051017T	100UF +-20% 50V	C117	1	
427	#N/A	67A3052203T	22UF +-20% 16V	C966	1	
428	#N/A	67A3052213T	220UF +-20% 16V	C410	1	
429	#N/A	67A3054713T	470UF +-20% 16V	C603	1	
430	#N/A			C605	1	
431	#N/A			C937	1	
432	#N/A			C939	1	
433	E-C-0404-4649	67A3091007T	10UF +-20% 50V	C111	1	
434	#N/A			C427	1	
435	#N/A			C906	1	
436	#N/A			C925	1	
437	E-C-0404-4658	67A3091013T	100UF +-20% 16V	C150	1	
438	#N/A	67A3091014T	100UF +-20% 25V	C916	1	
439	E-C-0404-4659	67A3091097T	1.0UF +-20% 50V	C743	1	
440	#N/A	67A3092297T	2.2UF +-20% 50V	C926	1	
441	#N/A			C960	1	
442	E-C-0404-0768	67A3094707T	47UF +-20% 50V	C606	1	
443	#N/A			C929	1	
444	E-C-0404-4665	67A3094797T	4.7UF +-20% 50V	C146	1	
445	#N/A			C434	1	
446	#N/A			C461	1	
447	E-D-0403-0899	93A395252T	HZ5C2	ZD103	1	HZ5C2
448	#N/A			ZD105	1	
449	#N/A			ZD106	1	
450	#N/A	93A3912852T	DIODE RD6.2EB2/NEC	ZD110	1	RD6.2EB2
451	#N/A	93A3950152T	UZ6.2BCB	ZD110	0	UZ6.2BCB
452	#N/A	93A3951352T	HZ6C2/HITACHI	ZD110	0	HZ6C2
453	E-D-0403-0241	93A3951552T	TZX3V0C	ZD703	1	TZX3V0C
454	#N/A	93A3951652T	TELEFUNKEN TZX5V1B	ZD101	1	TZX5V1B
455	#N/A			ZD104	1	
456	#N/A			ZD107	1	
457	#N/A			ZD410	1	
458	#N/A			ZD702	1	
459	#N/A			ZD704	1	
460	E-D-0403-1950	93A3951752T	TZX6V2C	ZD905	1	TZX6V2C
461	E-D-0403-1952	93A3952252T	TZX20B	ZD420	1	TZX20B
462	#N/A			ZD902	1	
463	#N/A	93A3952952T	HZ2B2	ZD403	1	HZ2B2
464	#N/A	93A521P52T	1N4005	D909	1	1N4005
465	#N/A	93A5247P52T	1N4004	D601	1	1N4004
466	E-D-0403-1961	93A6010552T	DINS4-4060	D101	1	DINS4
467	E-D-0403-1962	93A6021W52T	FR155/WILLAS	D407	1	FR155
468	#N/A	93A6026T52T	RECTIFIER DIODE FR107	D463	1	FR107
469	#N/A			D470	1	
470	#N/A	93A6026W52T	FR107	D436	1	FR107
471	#N/A			D910	1	
472	#N/A	93A6044T52T	RECTIFIER DIODE FR157S	D707	1	FR157S
473	E-D-0403-1944	93A10021F52T	1N5817/ ?	J014	0	1N5817 ?
474	#N/A	93A10021P52T	1N5817	D405	1	1N5817
475	#N/A			J014	1	
476	#N/A	93A10021W52T	1N5817	J014	0	1N5817
477	E-D-0403-1005	93A1040252T	F.R.D UF4004/GIT	D411	1	UF4004
478	#N/A			D740	1	
479	#N/A			D930	1	

Item	ViewSonic P/N	Reference P/N	Description	Location	Q'ty	Universal number#
480	E-D-0403-2146	93A10403Z52T	F.R.D TBA157 1A/400V	D741	1	TBA157
481	E-D-0403-1945	93A1060652T	F R D BYV26C	D918	1	BYV26C
482	#N/A	93A10606P52T	ER106/PANJIT	D406	1	ER106
483	#N/A	715A100821	CMPC		1	
484	#N/A	33A32786D	WAFER	P803	1	
485	#N/A	33A327812D	WAFER*PLUG	P801	1	
486	#N/A	33A327812D	WAFER*PLUG	P802	1	
487	#N/A	40A58126605	LABEL		1	
488	M-FT-0827-0085	53A408	FILTER	FB801	1	
489	#N/A			FB802	1	
490	#N/A			FB804	1	
491	E-IC-0401-4019	56A366509	LM1246DKA	IC801	1	LM1246DKA
492	E-IC-0401-2060	56A5396	LM2480NA BY NS	IC803	1	LM2480NA
493	#N/A	61A20810164	MOFR 100OHM+-5% 1W	R822	1	
494	E-R-0405-5729	61A20818164	MOFR 180 OHM +-5% 1W	L804	1	
495	E-R-0405-6753	61A152M12064	MOFR 12 OHM +-5% 2W	R808	1	
496	#N/A	61A153M10959	MOFR 1 OHM +-5% 3W	R835	1	
497	#N/A	65A2K4715A6052	470PF/2KV +-10% Y5P	C835	0	
498	#N/A	65A2K4715A6285	470PF/2KV +-10% Y5P	C835	0	
499	#N/A	65A2K4715A6921	470PF/2KV +-10% Y5P	C835	1	
500	#N/A	65A44256013T	56PF +-5% NPO 50V	C808	1	
501	E-C-0404-4817	67A3054709	47UF +-20% 100V	C829	1	
502	#N/A			C870	1	
503	#N/A	87A3504ZW	CRT COCKET(QQ FOCUS)		1	
504	#N/A	96A298	SHRINK TUBE UL/CSA		5	
505	#N/A	705A773ZR5603V	IC802 ASS'Y		1	
506	#N/A	61A17212152T	CFR 120 OHM +-5% 1/4W	R854	1	
507	#N/A			R855	1	
508	#N/A	61A17218152T	CFR 180 OHM +-5% 1/4W	R856	1	
509	#N/A	61A17282252T	CFR 8.2KOHM+-5% 1/4W	R821	1	
510	#N/A	61A21010352T	MFR 10K OHM +- 1% 1/6W	R809	1	
511	#N/A	61A21033252T	MFR 3.3K OHM +- 1% 1/6W	R813	1	
512	E-R-0405-6792	61A60233052T	CFR 33 OHM +-5% 1/6W	R804	1	
513	#N/A			R805	1	
514	#N/A			R806	1	
515	E-R-0405-6559	61A60275052T	CFR 75 OHM+-5% 1/6W	R801	1	
516	#N/A			R802	1	
517	#N/A			R803	1	
518	#N/A	61A175L10452T	CFR 100K OHM +-5% 1/2W	R880	1	
519	#N/A	61A175L47052T	CFR 47 OHM +-5% 1/2W	R872	1	
520	#N/A			R873	1	
521	#N/A			R874	1	
522	#N/A	64A176J1521T	1500PF 100V	C817	1	
523	#N/A	65A1K1015T6285	100PF/1KV Y5P+-10%	C862	0	
524	#N/A	65A4501033T	0.01UF +80-20% 50V	C834	1	
525	E-C-0404-4640	65A4501037T	10000PF/50V Y5V +80% -2	C861	1	
526	#N/A	65A4501047TV	0.1UF +80-20% 50V Y5V	C821	1	
527	#N/A			C823	1	
528	#N/A			C824	1	
529	#N/A			C849	1	
530	#N/A			C852	1	
531	E-C-0404-4438	65A5501034T	0.01UF 100V/Z5V	C831	1	
532	#N/A	65A5501047T	0.1u 100V	C856	1	
533	#N/A			C857	1	
534	#N/A			C858	1	
535	#N/A	65A517K1025T6052	1000PF 500V +-10% Y5P	C836	0	
536	#N/A			C837	0	
537	#N/A			C838	0	
538	#N/A			C860	0	
539	#N/A			C836	1	

Item	ViewSonic P/N	Reference P/N	Description	Location	Q'ty	Universal number#
540	#N/A	65A517K1025T6213	1000PF 500V +-10% Y5P	C837	1	
541	#N/A			C838	1	
542	#N/A			C860	1	
543	#N/A	65A517K1025T6285	1000PF 500V +-10% Y5P	C836	0	
544	#N/A			C837	0	
545	#N/A			C838	0	
546	#N/A			C860	0	
547	#N/A	67A601097T	1UF +-20% 50V	C815	0	
548	#N/A	67A701097T	1UF +-20% 50V	C815	1	
549	#N/A			C816	1	
550	E-C-0404-4666	67A701099T	1UF +-20% 100V	C853	1	
551	#N/A			C854	1	
552	#N/A			C855	1	
553	E-C-0404-4726	67A3051097T	1UF +-20% 50V	C801	1	
554	#N/A			C802	1	
555	#N/A			C803	1	
556	E-C-0404-4727	67A3054704T	47UF +-20% 25V	C850	1	
557	#N/A			C851	1	
558	#N/A	73A541095T	1uH+-5% peaking ciol	L806	1	
559	#N/A	73A5422810T	0.22UH +-10%	L850	1	
560	#N/A			L851	1	
561	#N/A			L852	1	
562	E-L-0407-1481	73A5447810T	0.47UH +-10% peaking co	L805	1	
563	#N/A	73A5468810T	0.68UH +-10%	L807	1	
564	#N/A	93A396952T	HZ7B2 6.9-7.2V	ZD810	1	HZ7B2
565	E-D-0403-1953	93A3953052T	TZX5V6D	ZD801	1	TZX5V6D
566	#N/A	93A529P52T	PS206	D817	0	PS206
567	E-D-0403-1960	93A529T52T	2A 600V 2A05	D817	1	2A05
568	#N/A	93A6431G52T	BAV20	D850	0	BAV20
569	#N/A			D851	0	
570	#N/A			D852	0	
571	#N/A			D853	0	
572	#N/A			D854	0	
573	#N/A			D855	0	
574	#N/A			D856	0	
575	#N/A			D857	0	
576	#N/A			D858	0	
577	E-D-0403-0619	93A6431T52T	BAV20	D850	0	BAV20
578	#N/A			D851	0	
579	#N/A			D852	0	
580	#N/A			D853	0	
581	#N/A			D854	0	
582	#N/A			D855	0	
583	#N/A			D856	0	
584	#N/A			D857	0	
585	#N/A			D858	0	
586	E-D-0403-0710	93A6450152T	SWITCHING DIODE BAV21	D850	0	BAV21
587	#N/A			D851	0	
588	#N/A			D852	0	
589	#N/A			D853	0	
590	#N/A			D854	0	
591	#N/A			D855	0	
592	#N/A			D856	0	
593	#N/A			D857	0	
594	#N/A			D858	0	
595	#N/A	715A101616	CRPCB		1	
596	M-SCW-0824-0609	2A60031	SCREW NUT		1	
597	E-IC-0401-4020	56A551524	LM2470TA	IC802	1	LM2470TA
598	#N/A	90A60267	HEAT SINK		1	
599	M-SCW-0824-0558	M1A173010128	SCREW M3x10		5	

Item	ViewSonic P/N	Reference P/N	Description	Location	Q'ty	Universal number#
600	M-MS-0808-7423	87A5016	RECEPTACLES		1	
601	M-WR-0828-5992	95A80022C	WIRE & CORE	CN901	1	
602	M-MS-0808-7434	96A296190	H.S. TUBING DIA.4.0MM		0	
603	E-X-0415-0043	93A2243H	12MHz	X101	1	
604	#N/A	93A2243J	12MHZ	X101	0	
605	M-MS-0808-6992	5A42501			1	
606	#N/A	12A3721	SILICONE RUBBER		1	
607	E-Q-0402-1508	57A60027	IRF634B	Q911	1	IRF634B
608	#N/A	90A3151	HEAT SINK		1	
609	M-SCW-0824-0615	M1A17308128	SCREW M3x8		1	
610	M-MS-0808-6992	5A711	TRANSISTOR HOUSING		1	
611	M-MS-0808-6991	32A3028505			1	
612	#N/A	52A60164500			2	
613	#N/A	52A60169502			1	
614	E-Q-0402-0576	57A4151	A TR.NPN TIP122/FAIRCHILD	Q406	1	TIP122
615	E-Q-0402-7024	57A706505	2SC5929	Q403	1	2SC5929
616	#N/A	90A6055500	HEAT SINK		1	
617	#N/A	93A22012	FMP-2FUR 1500/600V 5A S	D408	1	FMP-2FUR
618	#N/A	95A205T30042	WIRE HARNESS	HV1	1	
619	M-SCW-0824-0613	M1A11308128	SCREW 3.0X8		2	
620	M-SCW-0824-0559	M1A173012128	SCREW		1	
621	E-Q-0402-1457	57A7246	STP7NC70ZFP	Q901	1	STP7NC70ZFP
622	#N/A	90A339504PA	HEAT SINK		1	
623	#N/A	90A3602	HEAT SINK		1	
624	#N/A	M1A17306128	SCREW M3x6		2	
625	E-L-0407-1401	61A588TL	NTCR 15OHM+-15%2.5A THI	NR901	1	
626	#N/A	15A5659503	REAR BRACKET		1	
627	#N/A	B1A11406128	SCREW		1	
628	M-MS-0808-6990	32A30288	MICA		1	
629	E-IC-0401-4018	56A5841A	TDA4863A/PHILIPS	IC601	1	TDA4863A
630	#N/A	90A365506A	HEAT SINK		1	
631	#N/A	90A3602	HEAT SINK		1	
632	#N/A	90A360502	HEAT SINK		1	
633	#N/A	750A58521AV	CPT 17" 0.27 TCO CRT		1	
634	M-MS-0808-7376	33A31924	4P PLUG	P402	1	
635	#N/A	33A38033	WAFER EH-E	CN903	1	
636	#N/A	61A153M27159	MOFR 270 OHM+-5% 3W	R456	1	
637	#N/A	63A210J4325CU	4.3nF/1KV +-5%	C419	1	
638	#N/A	63A210J5328CC	0.0053UF +-5% 2000V	C418	1	
639	#N/A	63A210J5328DC	5300PF 2KV +-5%	C418	0	
640	M-MS-0808-7430	95A201F50162	16"璽 PULSE	TP403	1	
641	#N/A					
642	E-Q-0402-7029			Q426	1	
643	#N/A	57A60014	CEPF630 BY CET	Q428	1	CEPF630
644	#N/A			Q431	1	
645	E-R-0405-5761	61A152M10164	MOFR 100OHM+-5% 2W	R723	1	
646	#N/A			R879	1	
647	E-R-0405-3090			R425	1	
648	#N/A			R909	1	
649	#N/A	61A17210152T	CFR 100OHM+-5% 1/4W	L801	1	
650	#N/A			L802	1	
651	#N/A			L803	1	
652	E-R-0405-3195			R601	1	
653	#N/A			R603	1	
654	#N/A			R920	1	
655	#N/A	61A17210252T	CFR 1KOHM +-5% 1/4W	R930	1	
656	#N/A			R958	1	
657	#N/A			R860	1	
658	#N/A			R861	1	
659	#N/A			R862	1	

Item	ViewSonic P/N	Reference P/N	Description	Location	Q'ty	Universal number#
660	#N/A	61A17222452T	CFR 220KOHM+-5% 1/4W	R472	1	
661	#N/A			R476	1	
662	#N/A			R857	1	
663	#N/A			R858	1	
664	#N/A			R859	1	
665	E-R-0405-6525	61A60210252T	CFR 1K OHM+-5% 1/6W	R100	1	
666	#N/A			R107	1	
667	#N/A			R110	1	
668	#N/A			R118	1	
669	#N/A			R133	1	
670	#N/A			R415	1	
671	#N/A			R726	1	
672	#N/A			R933	1	
673	#N/A			R807	1	
674	#N/A			R827	1	
675	E-R-0405-6518	61A60210152T	CFR 100 OHM+-5% 1/6W	R102	1	
676	#N/A			R103	1	
677	#N/A			R106	1	
678	#N/A			R108	1	
679	#N/A			R109	1	
680	#N/A			R114	1	
681	#N/A			R151	1	
682	#N/A			R403	1	
683	#N/A			R404	1	
684	#N/A			R412	1	
685	#N/A			R422	1	
686	#N/A			R432	1	
687	#N/A			R814	1	
688	#N/A			R815	1	
689	E-R-0405-6532	61A60222352T	CFR 22K OHM+-5% 1/6W	R973	1	
690	#N/A			R823	1	
691	#N/A			R824	1	
692	#N/A			R825	1	
693	E-R-0405-6549	61A60247252T	CFR 4.7K OHM+-5% 1/6W	R101	1	
694	#N/A			R113	1	
695	#N/A			R121	1	
696	#N/A			R129	1	
697	#N/A			R130	1	
698	#N/A			R132	1	
699	#N/A			R152	1	
700	#N/A			R451	1	
701	#N/A			R465	1	
702	#N/A			R475	1	
703	#N/A			R902	1	
704	#N/A			R830	1	
705	#N/A	61A60282152T	CFR 820 OHM +-5% 1/6W	R751	1	
706	#N/A			R818	1	
707	E-C-0404-4605	64A176J1041T	0.1UF 5% 100V	C613	1	
708	#N/A			C828	0	
709	#N/A	64A178J1041T	C121X 0.1UF 100V +-5%	C957	1	
710	#N/A			C828	1	
711	#N/A	65A1K1015T6052	100PF/1KV Y5P+-10%	C949	1	
712	#N/A			C720	1	
713	#N/A			C955	0	
714	#N/A			C862	1	
715	#N/A	65A1K1015T6921	100PF/1KV Y5P+-10%	C955	1	
716	#N/A			C862	0	
717	#N/A	65A1K1025T6052	1NF/1KV Y5P+-10%	C705	1	
718	#N/A			C867	1	
719	#N/A	65A1K1025T6285	1NF/1KV Y5P+-10%	C705	0	

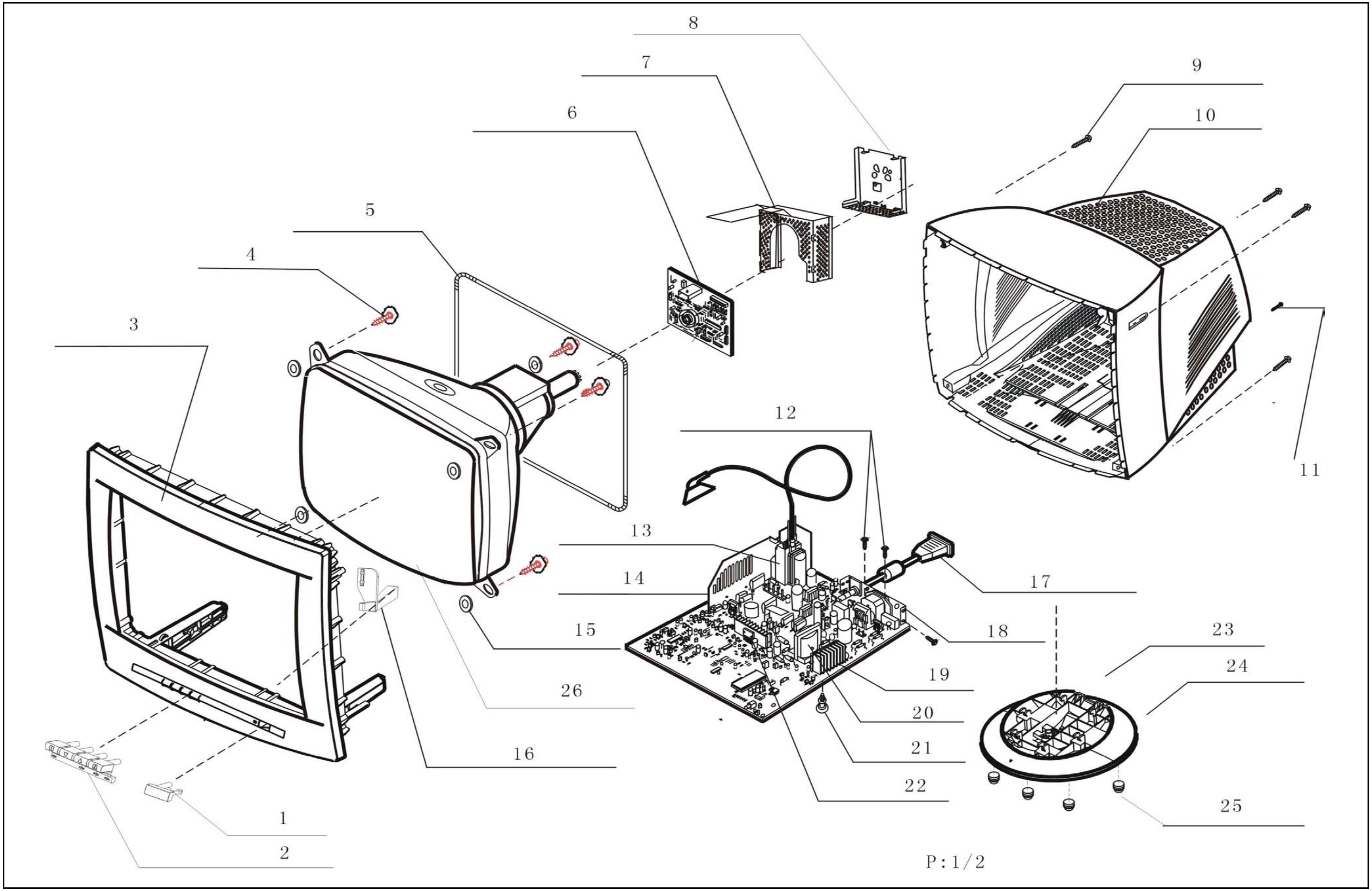
Item	ViewSonic P/N	Reference P/N	Description	Location	Q'ty	Universal number#
720	#N/A	65A1K1025T6285	1NF/1KV Y5P+-10%	C867	0	
721	#N/A	65A1K1025T6921	1NF/1KV Y5P+-10%	C705	0	
722	#N/A			C867	0	
723	#N/A	65A1K2215T6921	220PF/1KV Y5P+-10%	C950	1	
724	#N/A			C873	1	
725	E-C-0404-4629			C446	1	
726	#N/A			C614	1	
727	#N/A	65A44210113T	100PF +-5% NPO 50V	C913	1	
728	#N/A			C811	1	
729	#N/A			C812	1	
730	E-C-0404-4634			C131	1	
731	#N/A	65A44410213T	1000PF +-10% Y5P 50V	C132	1	
732	#N/A			C863	1	
733	#N/A	65A44410313T	10000PF +-10% Z5P 50V	C922	1	
734	#N/A			C876	1	
735	E-C-0404-4641			C114	1	
736	#N/A			C409	1	
737	#N/A	65A4501047T	0.1UF +80-20% 50V Y5V	C908	1	
738	#N/A			C818	1	
739	#N/A			C847	1	
740	E-C-0404-4656	67A3054707T	47UF +-20% 50V	C116	1	
741	#N/A			C810	1	
742	#N/A	67A604797T	4.7UF +-20% 50V	C704	1	
743	#N/A			C809	1	
744	E-L-0407-1474			J809	1	
745	#N/A	71A559T	C CORE RF BEAD RH 3.5X6X0	L809	1	
746	#N/A			FB850	1	
747	E-L-0407-1499			FB403	1	
748	#N/A			FB904	1	
749	#N/A			FB905	1	
750	#N/A			FB906	1	
751	#N/A			FB907	1	
752	#N/A	71A5519T	FERRITE BEAD 9X3.5X0.8	J055	1	
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754	#N/A			J808	1	
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760	#N/A	93A30408T	RG-4	D925	1	RG-4
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Item	ViewSonic P/N	Reference P/N	Description	Location	Q'ty	Universal number#
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784	#N/A	93A6431P52T	BAV20	D911	1	BAV20
785	#N/A			D917	1	
786	#N/A			D850	1	
787	#N/A			D851	1	
788	#N/A			D852	1	
789	#N/A			D853	1	
790	#N/A			D854	1	
791	#N/A			D855	1	
792	#N/A			D856	1	
793	#N/A			D857	1	
794	#N/A			D858	1	
795	M-WR-0828-5994			Jumper	6	
796	#N/A			D113	1	
797	#N/A			D401	1	
798	#N/A			D412	1	
799	#N/A			D414	1	
800	#N/A			D704	1	
801	#N/A			FB402	1	
802	#N/A			FB405	1	
803	#N/A			FB901	1	
804	#N/A			FB903	1	
805	#N/A			J001	1	
806	#N/A			J002	1	
807	#N/A			J003	1	
808	#N/A			J005	1	
809	#N/A			J006	1	
810	#N/A			J007	1	
811	#N/A			J009	1	
812	#N/A			J010	1	
813	#N/A			J011	1	
814	#N/A			J012	1	
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816	#N/A			J015	1	
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819	#N/A			J018	1	
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835	#N/A			J036	1	
836	#N/A			J037	1	
837	#N/A			J038	1	
838	#N/A			J039	1	
839	#N/A			J040	1	

Item	ViewSonic P/N	Reference P/N	Description	Location	Q'ty	Universal number#
840	#N/A	95A9023	TIN COATED	J041	1	
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843	#N/A			J046	1	
844	#N/A			J047	1	
845	#N/A			J048	1	
846	#N/A			J049	1	
847	#N/A			J050	1	
848	#N/A			J051	1	
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859	#N/A			J065	1	
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861	#N/A			J068	1	
862	#N/A			J069	1	
863	#N/A			J070	1	
864	#N/A			J071	1	
865	#N/A			J072	1	
866	#N/A			J073	1	
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875	#N/A			J084	1	
876	#N/A			J085	1	
877	#N/A			J086	1	
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882	#N/A			J091	1	
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892	#N/A			J101	1	
893	#N/A			J102	1	
894	#N/A			J103	1	
895	#N/A			J104	1	
896	#N/A			J105	1	
897	#N/A			J106	1	
898	#N/A			J107	1	
899	#N/A			J108	1	

Item	ViewSonic P/N	Reference P/N	Description	Location	Q'ty	Universal number#
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901	#N/A			J110	1	
902	#N/A			J111	1	
903	#N/A			J112	1	
904	#N/A			J113	1	
905	#N/A			J114	1	
906	#N/A			J123	1	
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909	#N/A			J126	1	
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911	#N/A			J131	1	
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914	#N/A			J138	1	
915	#N/A			J144	1	
916	#N/A			J145	1	
917	#N/A			J202N	1	
918	#N/A			J203N	1	
919	#N/A			J204N	1	
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926	#N/A			R730	1	
927	#N/A			R734	1	
928	#N/A			R911	1	
929	#N/A			R947	1	
930	#N/A			ZD701	1	
931	#N/A			J803	1	
932	#N/A			J810	1	
933	#N/A			C805	1	
934	#N/A			D810	1	
935	#N/A			J801	1	
936	#N/A			J802	1	
937	#N/A			J811	1	
938	#N/A			J812	1	
939	#N/A			J813	1	
940	#N/A			J814	1	
941	#N/A			J815	1	
942	#N/A			J083	1	
943	#N/A			C450	1	
944	#N/A			C480	1	
945	M-MS-0808-7436	9A2038	BRASS PIN	GND2	1	
946	#N/A			G2	1	
947	#N/A			B +	1	

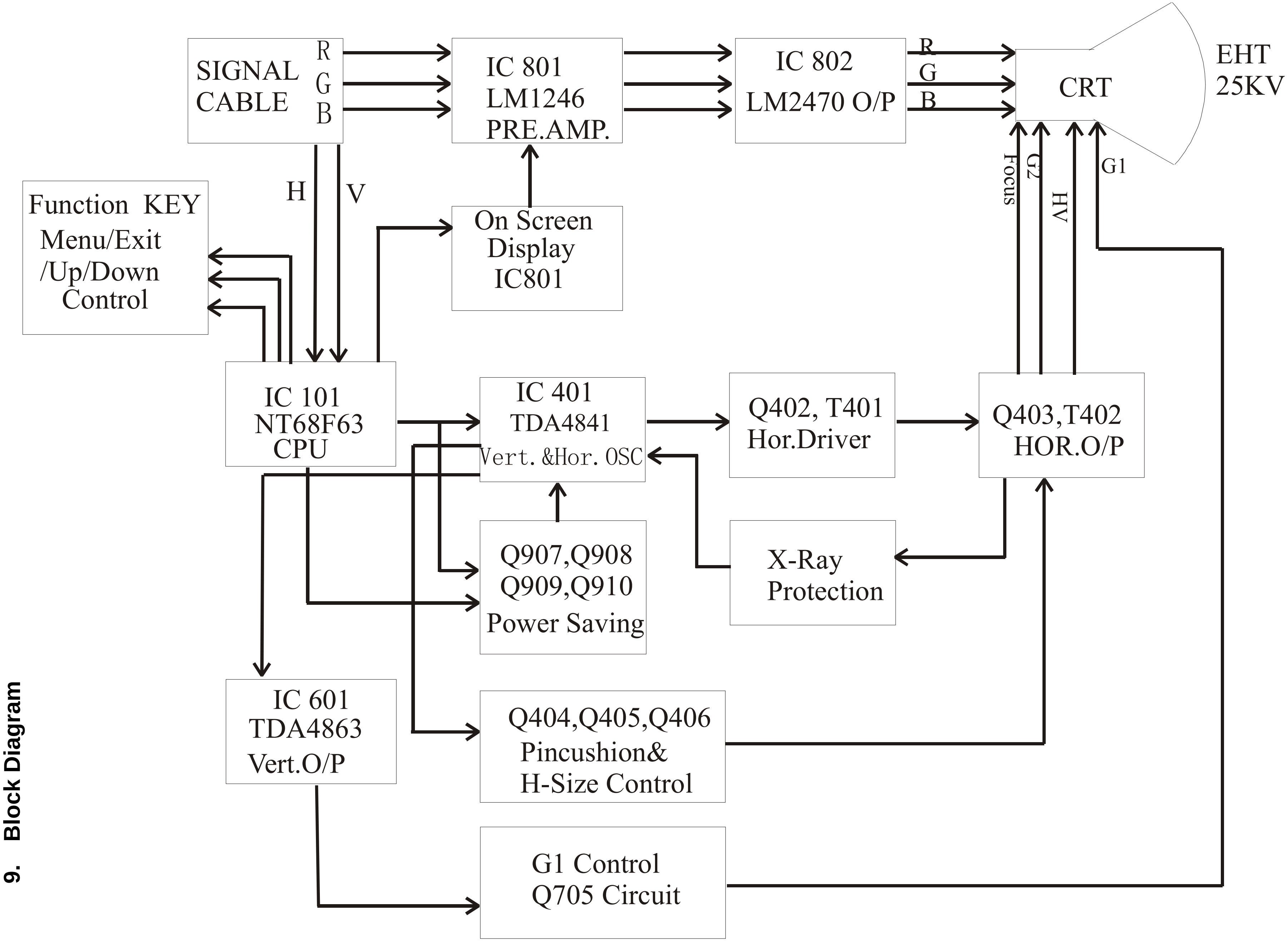
8. Exploded Diagram And Spare Parts List



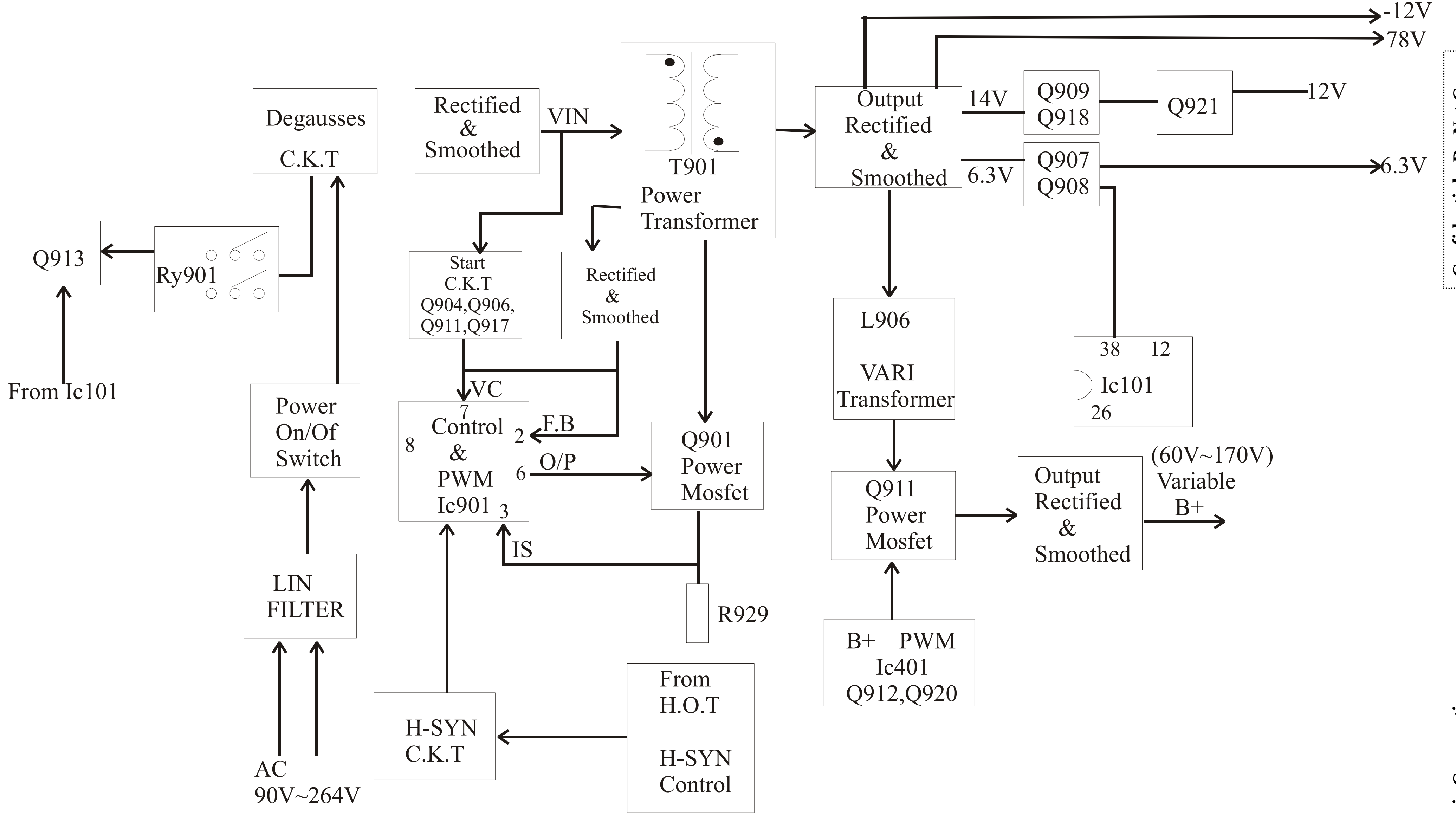
E70-11A/E/P Exploded Parts List

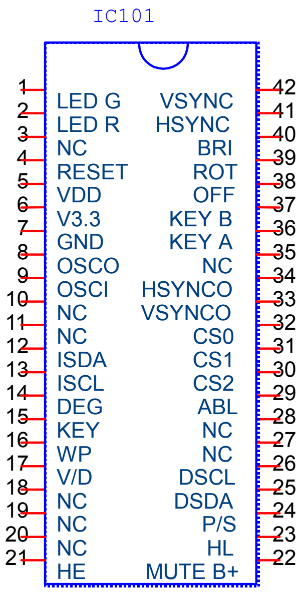
Item	ViewSonic P/N	Part number	Description	Q'ty
1	M-MS-0808-9744	33A4112-F0-A	KEY PAD	1PCS
2	PL-NB-0707-1080	33A4114-F0-A	POWER KNOB	1PCS
3	C-FP-0301-1023	34A799-AF0-A	FRONT PANEL	1PCS
4	M-SCW-0824-0608	1A503-5T-47	SCREW	4PCS
5	E-L-0407-1611	750A1697-504-JA	DEGAUSSING COIL	1PCS
6	M-MS-0808-0803	87A501-6	CRT SOCKET BOARD VIDEO BOARD	1PCS
7	M-MS-0808-9745	85A6027-1	CRT BOARD SHIELD	1PCS
8	M-MS-0808-9746	85A6028-500	SHIELD	1PCS
9	M-SCW-0824-0616	Q1A340-16-128	SCREW M4X16	4PCS
10	C-BC-0302-0609	34A762-F0-1A	BACK COVER	1PCS
11	M-SCW-0824-0610	B1A1035-10-128	SCREW M3.5X10	1PCS
12	M-SCW-0824-0613	M1A1130-8-128	SCREW M3X8	1PCS
13	E-FBT-0406-0269	79A167-119-SA	FBT(T403)	1PCS
14	E-D-0403-2806	93A610-11-52T	D412	1PCS
15	M-MS-0808-9747	5A38-8	RUBBER WASHER	4PCS
16	M-MS-0808-9748	33A4113-1	POWER LENS	1PCS
17	A-VC-0101-0292	89A174L-8DH-GB	SIGNAL CABLE	1PCS
18	M-MS-0808-9749	15A5659-501	AC INLET	1PCS
19	M-MS-0808-9752	90A6042-1	HEAT SINK	1PCS
20	E-T-0408-0522	80A791-1-TA	T901	1PCS
21	M-MS-0808-9750	11A6033-1	PCB SUPPORT	1PCS
22	M-MS-0808-9751	90A348-501	HEAT SINK(IC601)	1PCS
23	C-BS-0303-0539	34A740-F0-L	SWIVAL	1PCS
24	C-BS-0303-0538	34A741-F0-L	BASE	1PCS
25	PL-PD-0714-0055	12A385-1	RUBBER FOOT	4PCS
26	E-YK-0413-0059	750A5850-7AV	CRT	1PCS

9. Block Diagram

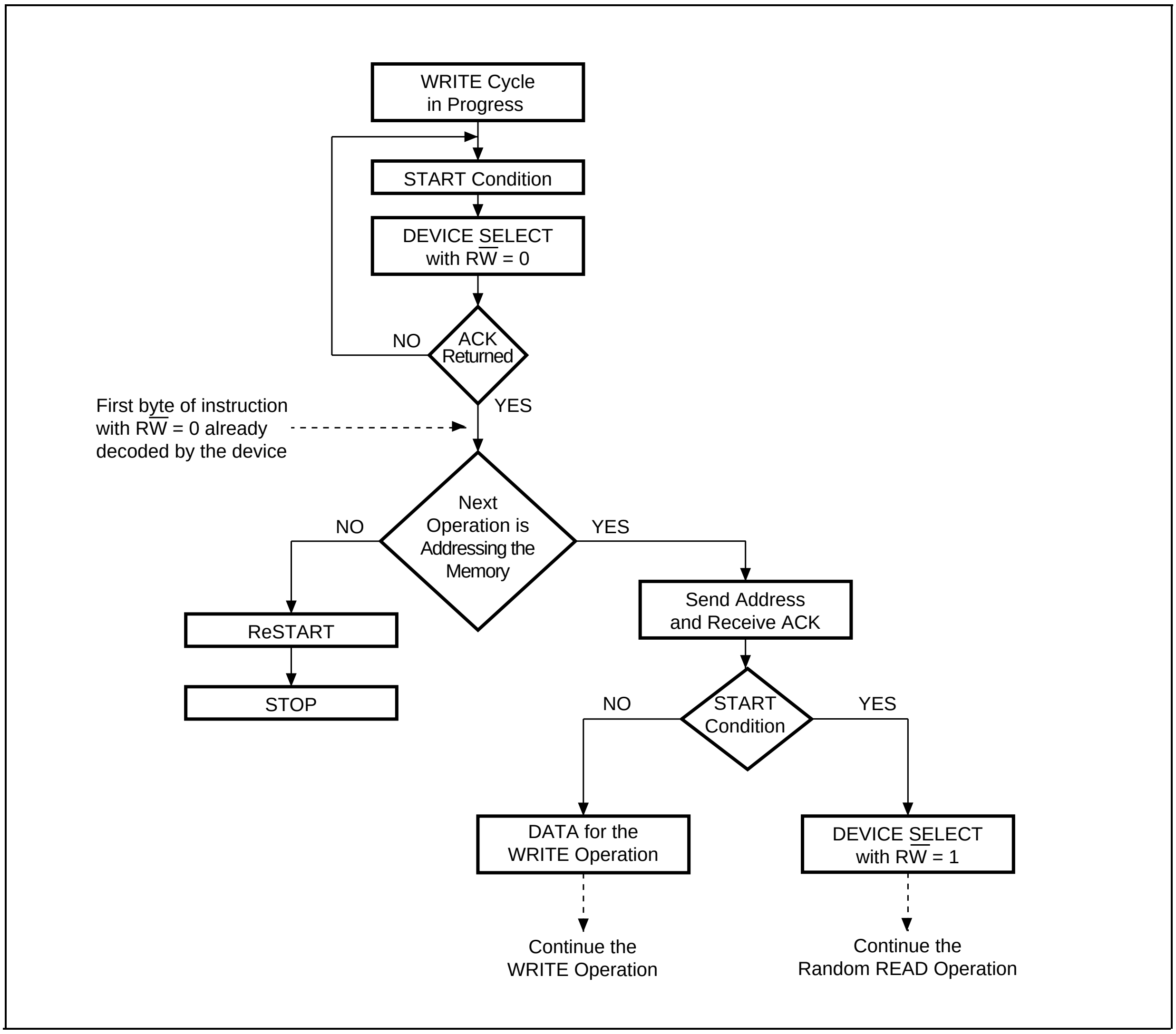


9-1 BLOCK DIAGRAM (SMPS)

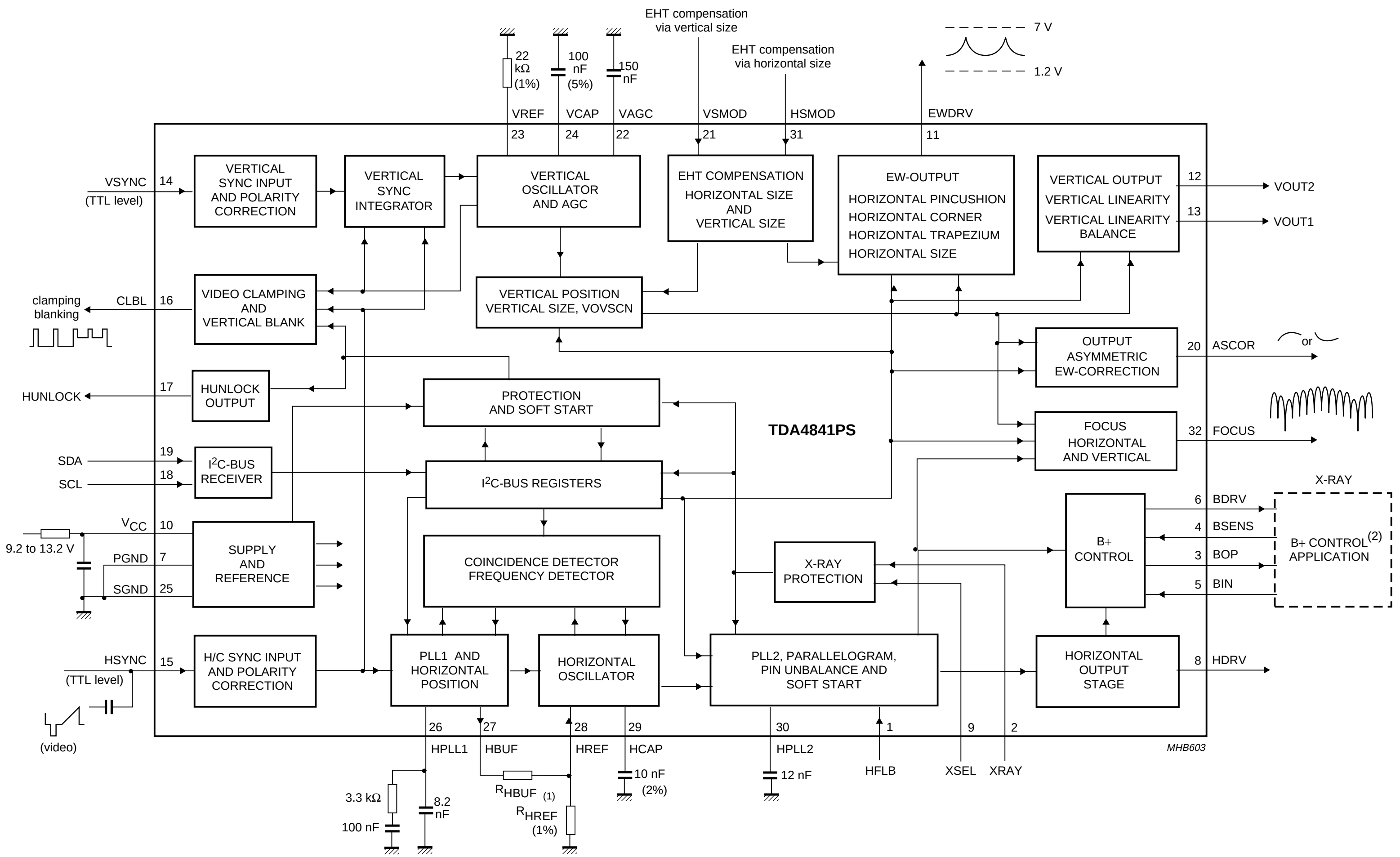




IC102 M24C08-WBN6

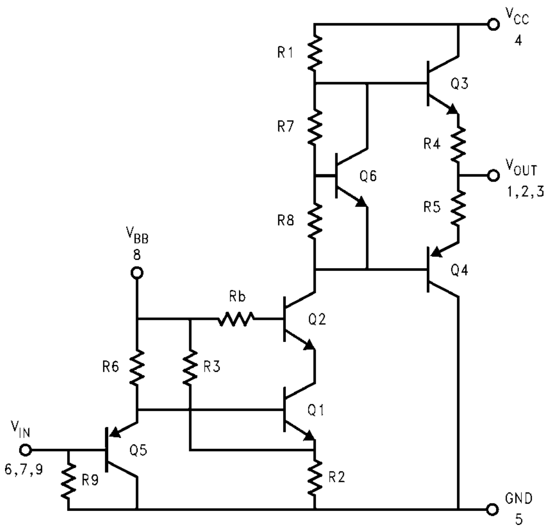


IC401 Block diagram and application circuit.

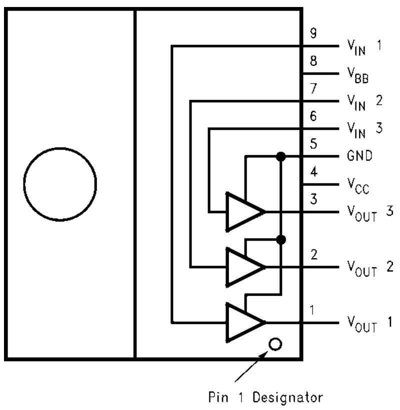


IC802 LM2470TA

Schematic Diagram



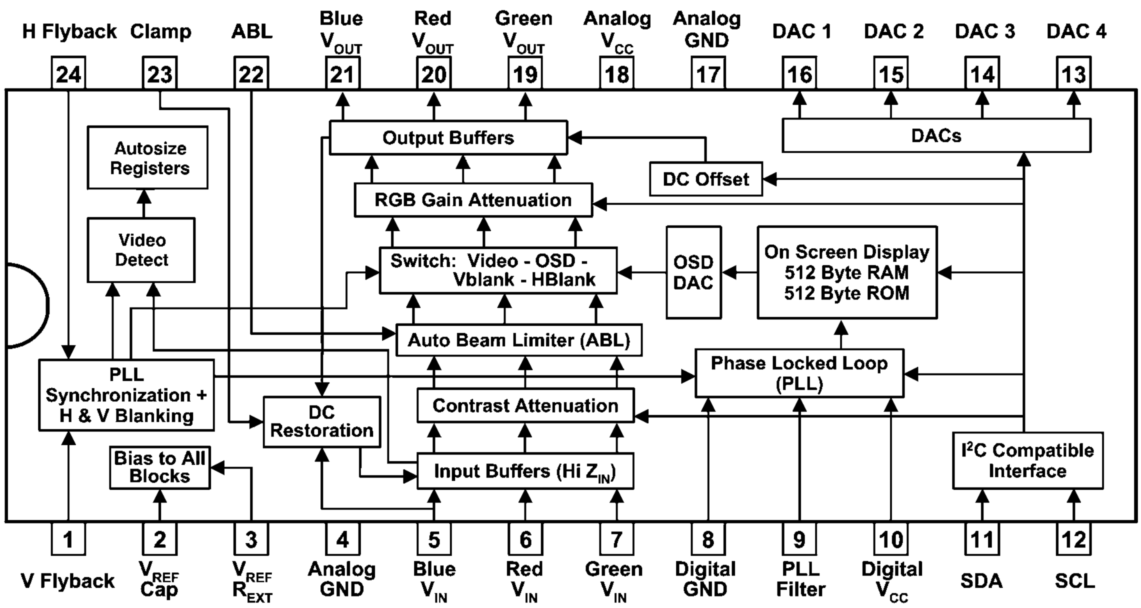
Connection Diagram



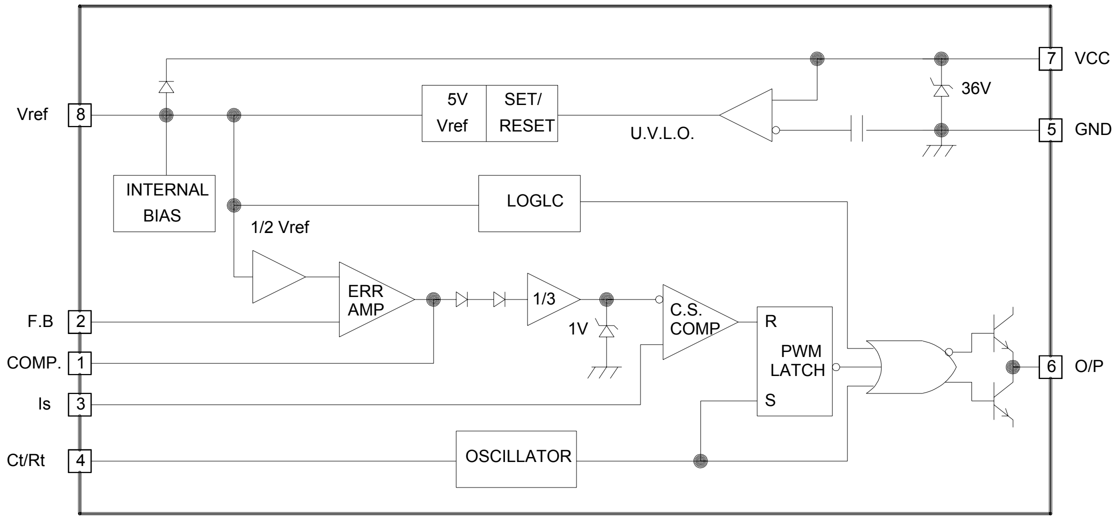
Note: Tab is at GND.

FIGURE 2. Top View
LM2470

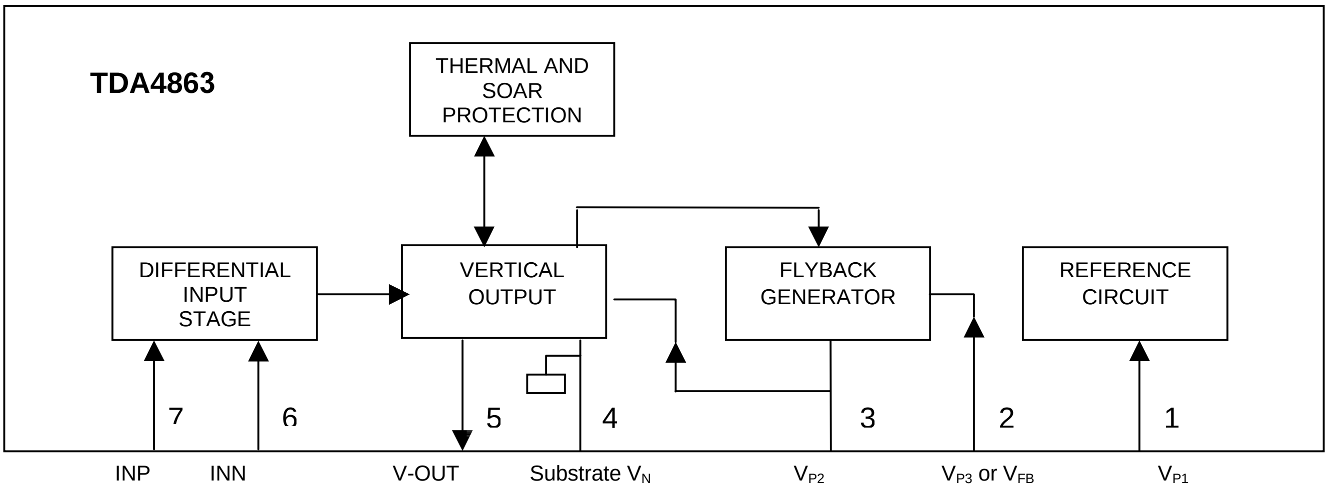
IC801 LM1246 Block Diagram



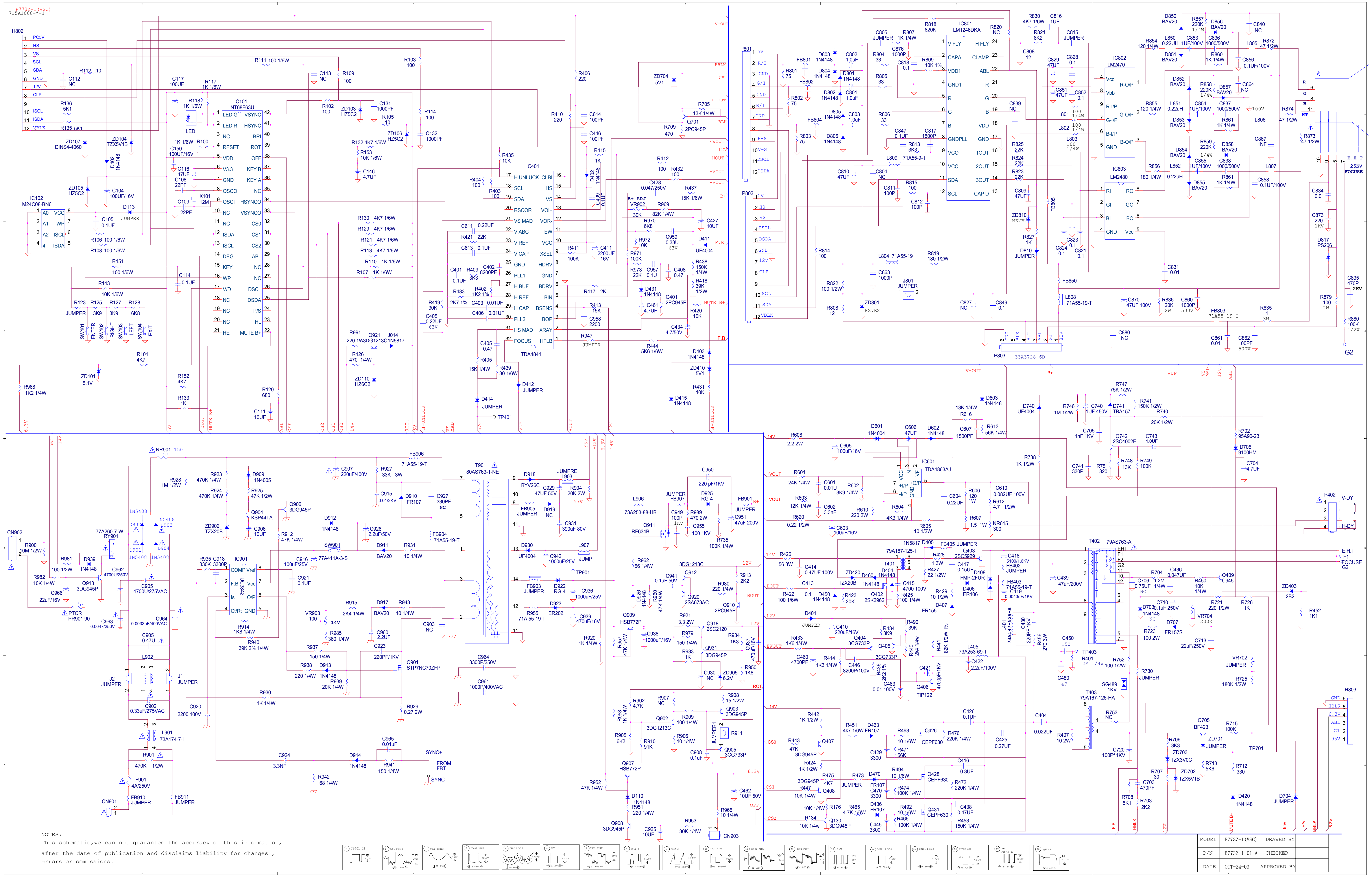
IC901 3842



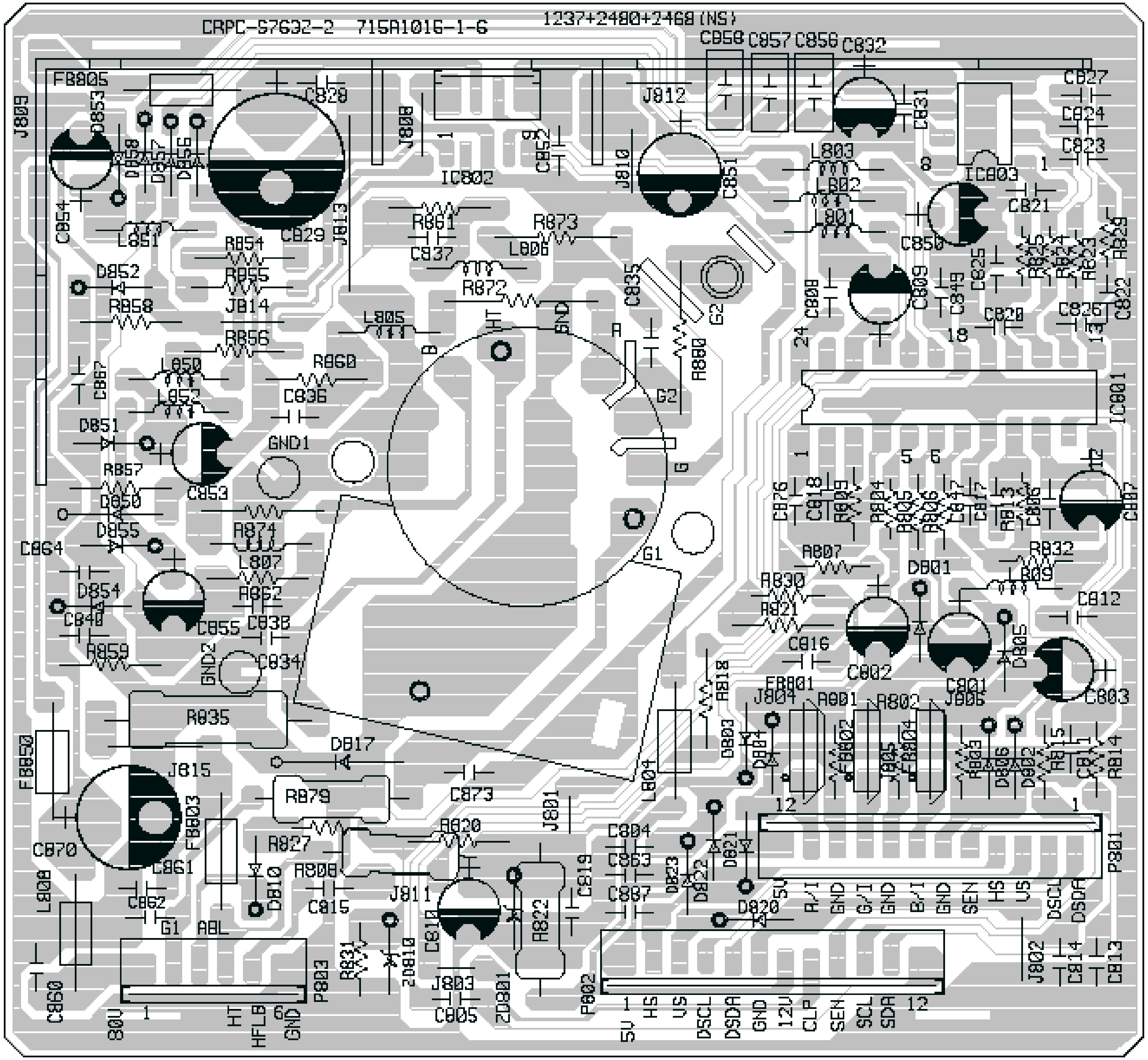
IC601 TDA4863A



10. Schematic Diagrams



Video Board Layout



Reader's Response

Dear Readers:

Thank you in advance for your feedback on our Service Manual,which allows continuous improvement of our products. We would appreciate your completion of the Assessment Matrix below, for return to ViewSonic Corporation.

Assessment

A.What do you think about the content after reading **E70-11** Service Manual?

Unit	*Excellent*	*Good*	*Fair*	*Bad*
1. Precautions And Safety Notices				
2. Specification				
3. Front Panel Function Control Description				
4. Circuit Description				
5. Adjusting Procedure				
6. Trouble Shooting Flow Chart				
7. Recommended Spare Parts List				
8. Exploded Diagram and Spare Parts List				
9. Block Diagram				
10. Schematic Diagrams				
11. PCB Layout Diagrams				

B.Are you satisfied with the **E70-11** service manual?

Item	*Excellent*	*Good*	*Fair*	*Bad*
1. Service Manual Content				
2. Service Manual Layout				
3. The form and listing				

C.Do you have any other opinion or suggestion about this service manual?

Reader's basic data:

Name:		Title:	
Company:			
Add.:			
Tel:		Fax:	
E-mail:			

After completing this form, please return it to ViewSonic Quality Assurance in the USA at facsimile 1-909-839-7943. You may also e-mail any suggestions to the Director, Quality Systems & Processes (marc.maupin@viewsonic.com)